Riga XL 5-6-7-8-9

ALUMINUM GREENHOUSE

INSTALLATION INSTRUCTIONS

Subject to technical changes!

HOK version 04/2024
Exaco edits 03/13/25

Assembly videos are available on our YouTube Riga XL Playlist, find the link at www.exaco.com or scan the QR code.

www.exaco.com
877-760-8500
customerservice@exaco.com

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Customer Service or Assembly Questions?
Give us a call: 1-877-760-8500 customerservice@exaco.com
www.EXACO.com
Please watch our animated assembly videos on our Exaco YouTube Channel. Find the link at www.exaco.com
OR Scan the code below:

Thank you for purchasing a Hoklartherm Riga XL greenhouse, imported and distributed in North America by Exaco in Austin, TX. Exaco will provide all the North American based customer support for your greenhouse. Please feel free to reach to Exaco customer service with any questions you may have during assembly!

Questions? Need Assembly Support?
Please call Exaco at 877-760-8500 or email customerservice@exaco.com.

THE FOLLOWING SECTION CONTAINS IMPORTANT RESOURCE INFORMATION - PLEASE READ CAREFULLY BEFORE BEGINNING ASSEMBLY

Introduction

In this manual, you will find the assembly instructions for all standard kit greenhouses. However, this manual also contains pages which apply to optional accessories that may not be included with your kit. Riga XL greenhouse "kits" vary by retailer. Some retailers may bundle additional accessories with their greenhouses - please check your order closely so you understand which accessories your greenhouse includes before building. It is also very helpful to plan out where each of these additional accessories will go to determine if you need to insert bolts/hardware during the build.

This greenhouse is designed for cultivation of plants/flowers. Therefore leakage, water drops and condensation inside the building are allowed. The building may only be entered by competent persons during cultivation or maintenance. Anchoring the greenhouse of the foundation is vital and should be checked periodically, please read the anchoring and foundation section so you can plan accordingly. If you do not wish to work with concrete, there is an optional foundation frame available, but is best when shipped with the greenhouse due to the high cost of freight shipping. If your area is subject to very strong wind gusts, we strongly recommend adding some additional wind protection such as: a row of small trees, large shrubs or a wooden fence. Please contact Exaco to discuss additional anchoring options and window bracing kits for high wind or high snow conditions. In very high snow/wind load areas, you may consider our XL reinforcement kit which is and additional supportive structure that installs inside the greenhouse. One should at all times pay attention to the local building regulations.

The Riga XL greenhouse has been engineered and manufactured in Germany using the metric system. We strongly recommend having a metric or combination tape measure on hand during assembly. We have converted and added inches to the manual when feasible – however for the most accurate and precise measurements some do still remain in metric. The bolts, screws and other hardware remains in millimeters. A simple combination household/school ruler should be sufficient for measuring these. Using the metric system keeps your measurements more precise. If you prefer to work only in inches, you may use a converter tool available in app stores for smart phones.

Receiving the shipment

Our greenhouses are shipped by freight carrier. The delivery driver will have a Bill of Lading that lists the quantity of boxes/crates you should receive. Check all the outer boxes/crates for damage and make sure you have the correct quantity – but always accept delivery in all cases, regardless of

damage you might see. Please do not refuse any boxes or the shipment. We will gladly replace any damaged items. Sending replacement parts is a simple and easy process. If you are missing a box or see damage – **write this on the Bill of Lading before the driver leaves.** Notify Exaco of any damage or missing boxes as soon as possible. Pictures are very helpful to us when in determining the extent/type of damage.

Storage

- The delivery must be stored in a dry place, protected from direct sunlight and any form of moisture. You may store the packaged items outdoors, but they must be securely covered and protected with a tarp from moisture and weather.
- Excessive water, moisture, humidity or condensation in the packaging can quickly lead to corrosion on profiles (from packaging) and/or moisture/insects in the channels of the polycarbonate panels which can be difficult to remedy.
- Note that leftover packaging, plastic, cardboard, as well as the wood of the glass pallet are not taken back. Please reuse, recycle, or dispose of properly.

Planning for Your Riga XL Greenhouse

Components of Greenhouse Structure

- **Door:** All Riga XL greenhouses have a front and a rear dutch door (split in a top door and bottom door).
- **Roof vents vary by model:**
  - Riga XL 5 and Riga XL 6 models have four roof vents with auto openers
  - Riga XL 7 and Riga XL 8 models have six roof vents with auto openers
  - Riga XL 9 model has eight roof vents with auto openers
  - NOTE: if you wish to order/add additional roof vents – this must be done during assembly or the unit must be disassembled to install them.
- **IMPORTANT for Riga XL 7,8 and 9:** Additional structural reinforcements are used on the Riga XL 7,8, and 9 units. Not all the curved aluminum extrusions will be the same. There are special curve pairs packaged with a metal strap. The position of these special curves need to be planned for when assembling the greenhouse!

Placement of the Greenhouse - The placement of the greenhouse varies by intended usage, climate, location, and space available. There is a wealth of information to be found online on this subject, here are some considerations:

- Will your greenhouse be in full sun or get afternoon shade? Greenhouses do what they are intended to do - heat up quickly on sunny days. Great for the winter, but depending on your climate, it can be a challenge during summer months. Think about what you will be growing as well as the seasonal usage of your new greenhouse to determine appropriate sun exposure. It may help to watch the seasonal variations of sun angles in your yard to determine the placement.
- Depending on what you are growing and where you are located, you may wish to orient your greenhouse east/west or north/south - many garden bloggers have weighed in on this and research may help you consider the options. In many areas of the US, we do get plenty of hours of sunlight. Some users end up placing the greenhouse based on layout/space available, aesthetics and convenience.

- The site must be level. If it is not, you will need to prepare the area to provide a firm and level surface to construct your greenhouse. This may include building a retaining wall or placing your greenhouse on a stem wall - or just leveling out the site. Consider rainwater flow in your yard if you are in a hilly area.

Flooring - The greenhouse does not include flooring material, allowing it to be customized to your needs and use. When planning your flooring, consider the intended use of the greenhouse, the plants that will be grown, drainage, heat sink benefits of the material, insulation, weed blocking, as well as aesthetics. If you use a natural flooring option - consider including a weed barrier. Below are a variety flooring options to consider:

- Soil - this is a great option if you have fertile soil and wish to plant directly into the ground. This can be used in combination with other options below.
- Pea gravel, crushed stone, etc. - provides natural drainage and some crushed rocks help with weed control
- Pavers and bricks - A very nice-looking option with natural drainage capabilities. May also be used for paths in combination with in ground planting areas.
- Wood - Looks very nice, but requires more maintenance. Keep in mind that the wood may deteriorate before the greenhouse lifespan is over.
- Full concrete slab - This can double as your anchoring surface as well. Keep in mind that greenhouses can be wet environments so texture and drainage need to be considered.
- Tiling - this can be a beautiful option as well. If your greenhouse is a functioning greenhouse, consider water drainage. Tile may get very slippery when wet.

Water and Electricity - You may choose to bring water and electricity into your greenhouse. If possible, it is recommended to plan for this ahead of time so that you can plumb/wire underneath the base frame of the greenhouse. Generally, users will bring electricity under the frame at the most convenient location and then attach conduit to the frame of the greenhouse to the desired location.

Ventilation and Cooling of Greenhouse - Greenhouses are effective at heating up quickly on sunny days. If you discover your greenhouse is becoming warmer than you desire, here are some options for cooling:

- Exhaust Fan/Intake Vent - recommended to be installed in the gable of the greenhouse to blow out the hottest air. You can cut the polycarbonate to allow for this. Many exhaust fans will use an external thermostat to control at what temperature it turns on and off. Place the exhaust fan opposite an intake vent to create a cross breeze. For the most effective cross breeze, it is often recommended to close roof vents to force airflow through your intake vent. There are many places that have exhaust fan calculators for greenhouses to determine what you need.
- Misting System - in dry environments, a misting system turning on at the hottest point of the day can cool a greenhouse up to 15 degrees.
- Exterior shade cloth - an exterior shade cloth can be highly effective. An aluminet-style shade cloth is a metallic woven shade cloth that goes up and over the outside of the

greenhouse. The metallic surface reflects the heat of the sun's rays before they get inside the greenhouse, while also providing shade.

Heating the greenhouse - Although the greenhouse heats up quickly during sunny days, you will likely find you will need to provide supplemental heat during cold winter nights and cold cloudy days.

- Heaters are common in greenhouses. Be sure to properly vent according to manufacturer instructions if needed. Find a BTU calculator online to determine how powerful a heater you need. This is based on a variety of factors including greenhouse material, size, location/climate, low temperatures and desired goal temperature.
- Heat Sink - The more mass you have inside your greenhouse, the more heat can be absorbed during the warm day to release at night. This can help mitigate huge temperature swings during light frost, but can also reduce your heating costs. Easy ways to add mass that can retain heat are raised beds, a large dark water tank, or organic material. There is much information online about planning/designing more in-depth heat sinks in your greenhouse - including flooring choices.
- Resources on insulated floors, insulated "skirts" around the greenhouse, and geothermal heat can be found on many garden blogs.

Building your Riga XL Greenhouse

Key Ways to Ensure a Successful Greenhouse Build

- Read all resource information thoroughly, being familiar with the product and assembly process will make things go more smoothly and quickly.
- Study the assembly instructions and follow them step by step. We also recommend watching our YouTube assembly videos for the main assembly and accessories. Find the link to our YouTube playlist on the cover of this manual.
- Be clear on what you have - determine number and placement of roof vents, optional accessories (and special reinforcement curves for Riga XL 7,8,9) and optional accessories such as shelves so that you have so you can plan ahead.
- **The greenhouse should be built in a place sheltered from wind or heavy storms. Do not attempt to build this greenhouse in windy conditions. <u>It is dangerous to leave a greenhouse partially assembled.</u> Damages during assembly process, due to bad weather or winds, are not covered by our warranty.**
- Much of the early assembly can be done by one person, but when all the components are assembled to build the large structure, it is recommended to have a second person to assist for safety and ease.
- Your polycarbonate will come with protective film. Loosen the protective film only at the edge and remove the rest only after the panel is securely in place. **HOWEVER, do not leave the film on more than 1 day in the sun as the film can burn tight to the polycarbonate and will be extremely difficult to remove.**
- Unlike most greenhouses, the mounting of the aluminium profiles is done together with the glazing. This results in an absolutely secure glazing and the best possible stability of the greenhouse.
- Always observe the locally applicable building regulations.

- If you have questions, are struggling or unsure – please contact us! We can be reached at 877-760-8500 or 512-407-8500 or by email at customerservice@exaco.com

Preparing the Construction Site

A properly prepared construction site is an absolute requirement for the smooth assembly of your greenhouse!

- The ground must be stable, firm, level and free of all obstacles.
- A space of at least 30 inches is required around the greenhouse for the placement of ladders and installing the glazing.
- **HELPFUL TIP!!!** We strongly recommend creating a simple wooden support structure for your very long ridge beam to make assemble quicker and easier. You can use a 2x4 piece of wood with 3-4 legs that has a top level of 9'8" tall. Below are a few examples:

Foundation –

- The optional Riga XL foundation frame kit provides a very secure way to anchor the greenhouse without the need for cement. This needs to be ordered separately from the greenhouse, although some retailers do have it as part of their "kit". It is a I beam -shaped

extrusion that connects to the soil profile of your Riga XL greenhouse before building begins. To anchor the greenhouse, you would dig a 4-5" deep trench centered on the exterior measurements of the greenhouse. Check the trench is level and square and then proceed with assembly. During assembly, you may wish to partially bury the foundation as you go to help hold it secure – this is especially helpful on the long sides where the pressure of the curved polycarbonate pushes the bottom profiles out. At the end of the assembly, finish by filling the trench fully with dirt to anchor the greenhouse.

- Alternatively, the greenhouse kit includes L brackets for attaching the greenhouse to another surface such as a knee wall or concrete strip foundation – however, any anchoring hardware (such as screws, bolts, wedge bolts, chemical anchors, etc.) are <u>not</u> included as it will vary by your foundation material, site, and builder. When purchasing any hardware for the greenhouse, please look for stainless steel to avoid rust as the greenhouse is a moist environment.
- The dimensions of our aluminum structures are always the outer dimensions of the structure.
- If using concrete, we suggest an 8" wide concrete foundation strip foundation according to the foundation dimensions on the foundation chart. A slab will also work, but must be 100% level and flat so that the lower profile can be mounted on it without the need of much additional levelling. Additionally, the inside will need sloping and a drain to accommodate water drainage. Note that all anchors attach on the interior of the greenhouse.
- Get detailed advice on the foundation from your local professional – climate/regional requirements may vary.
- The anchoring as well as the routine checking of the condition must always be provided by the owner or operator.

Required/Recommend Tools

- Metric or Combination Measuring Tape (highly recommended)
- Household ruler with metric measurements for measuring length of screws/bolts
- Socket wrench or spanner - 10mm (it is helpful to have multiple)
- Adjustable wrench
- Level
- Screwdrivers (Phillips and Flathead) – Impact driver may be used with CAUTION as stainless screws are malleable.
- Drill + bits
- Impact driver and 1/2" drill bit (useful to notch channel to insert missed bolts)
- Two Rubber Mallets
- Scissors (to cut the rubber)
- At least two stable A frame Ladder/s – one 10' and one 8' is preferred, taller if on a knee wall.
- Caulk gun
- Clear silicone caulk is included with the kit, if you need more, it may be purchased from Exaco or use a high-quality neutral cure silicone from a local store.
- Lithium Grease in a spray can – this is extremely helpful to slide the extrusions/profiles along the floor and ridge. Also very helpful when sliding the roof vents along the ridge beam during installation.
- Tape – this can be extremely helpful to hold bolts in desired location during assembly.

- Gloves – the ends of the aluminum extrusions can be sharp
- Patience – do not rush and please, call Exaco customer service with questions – we are here to help! 877-760-8500 or customerservice@exaco.com

Packaging Counts and Contents (depending on the size greenhouse you have, box counts may vary)

Box 1: Gable parts – straight vertical and horizontal profiles for gables
Box 2: Accessories box – Window and Door extrusions and parts
Box 3: Small Parts – Hardware, brackets, gaskets, small parts
Box 4: Long parts (XL 7, 8, and 9 have multiple boxes for these parts – indicated on boxes)
Curves: There will be multiple bundles of curves (Riga 7, 8, and 9 have special curves with reinforcement bars for the center of the greenhouse
Glazing Bundles: 1 Gable Box and Multiple boxes of sidewall poly depending on unit.

Basic Assembly Order of Greenhouse

1. Preparing your site – must be level and accommodate anchoring of the structure (see section above and "Foundation and Anchoring" in section further on in this manual)
2. Unpacking, sorting, and checking components. Sorting of the profiles/extrusions according to size and shape will be helpful. The aluminum profiles (extrusions) are identified by their cross-section and length. Packages for specific accessories should be kept together – i.e. doors, windows, vents, shelves, etc. It is helpful to have a metric or combination tape measure for this.
3. Follow the order of assembly in the manual:
    - Foundation Frame attachment (if using)
    - Roof Windows/Vents
    - Upper Door (front and rear)
    - Lower Door (front and rear)
    - Rear Gable
    - Front Gable
    - Assemble the full unit with sidewalls

    HELPFUL NOTE: The windows, vents, doors and gables can be assembled ahead of time and then one nice calm day you can approach the erection of the full greenhouse. This also helps you get familiar with the unit and assembly style.
4. Checking the horizontal and vertical alignment of the structure again with a level.
5. Tightening and fastening all structural components.
6. Anchoring/securing of the greenhouse to the ground.

Safety Considerations

- Only assemble in dry and windless weather
- Keep children away from the construction site.
- Watch your step! Be sure ladders are securely placed before climbing them.

Additional Remarks:

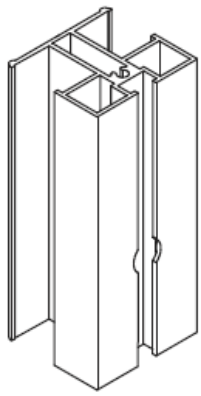
This manual is prepared for all standard builds. We reserve the right to make changes to the construction.

IMPORTANT!

- Always read the entire manual before starting
- When unpacking the profiles and polycarbonate, do not use sharp or pointed objects to avoid damaging the parts.
- Always comply with local building regulations, which are the responsibility of the buyer/owner.
- Insurance: it is advisable to inform your insurance company about the installation of your greenhouse.
- During heavy snowfall, as with any greenhouse, it is recommended to clear the greenhouse roof of snow.
- **During storms, all open parts should be closed (roof windows, doors, side windows, etc.). If you latch down your roof vents with the sash locks, you MUST release the auto openers (pinch the arms together and you can leave it hang.**

Helpful Suggestions

- Please thoroughly read the email that was sent to you from Exaco customer service for additional addendums to the manual and other important information.
- Understand which greenhouse accessories you have and where they will be placed.
- Look through the entire manual and watch the assembly videoes to help you prepare and understand the greenhouse assembly process.
- You may start with assembly of the doors, windows, and gables. This helps create familiarity with the materials and construction process and gives a head start when it comes to assembly time.



- **VERY HELPFUL NOTE:** Much of the greenhouse is assembled with series of bolts that are inserted into the channels on the aluminum profiles/extrusions. If you miss inserted a bolt where needed, there are insertion points in many of the vertical and curved profiles/extrusions. You may also create your own insertion point with a 1/2" drill bit. This will not compromise the integrity of the structure.
- Sometimes bolts are added ahead of time and can slide around in the channels. Using a bit of tape across the channels to hold them in place or at a desired height can be helpful.
- If you are having difficulty sliding curves or other parts (roof vents, etc) try lithium grease to help lubricate them.
- If you are having trouble inserting polycarbonate into the channels, you can pinch the edges of the polycarbonate to make it slightly narrower. A little bit of bar soap can also help lubricate the panels so they slide in easier. The first 1/2” or so of the edge of the polycarbonate is encased in the channel. If the edges of you panels are slightly dinged in, these can often be softened with a little heat (hairdryer or low setting on a heat gun) and pinched together and will cause no issue.
- The stainless-steel hardware included with your greenhouse is preferred for damp greenhouse settings. This high-quality metal is malleable however, and the heads of the screws can be stripped or break if proper precautions are not taken. Set your driver (impact driver is preferred) to a low setting and hand tighten the screw at the end to avoid snapping the screw head.

- **Do not attempt full greenhouse assembly on a windy day to avoid injury and damage to the greenhouse. If you have to stop assembly of the main structure at mid-point – use sandbags and tie-downs to weigh the structure down as much as possible. A half-assembled greenhouse can act like a parachute and catch wind and blow away.**

In the event of improper use and non-compliance with the safety instructions, we accept no liability for damage/consequential damage to persons or items, including those stored inside the greenhouse.

We strongly recommend placing your greenhouse on your homeowners' insurance policy. Note that not all insurance policies automatically cover greenhouses. Please reach out to your insurance company to confirm your policy.

Refer to the Exaco YouTube Playlist for the Riga XL for animated assembly videos as well as specific installation videos regarding your greenhouse. This playlist is also accessible via the QR code to the left.

Questions? Need Assembly Support?
Please call Exaco at 877-760-8500 or email customerservice@exaco.com.

Optional Accessories

There are a variety of optional accessories available, some of which are listed below.

- Foundation frame – please see above section on anchoring for more information
- Top shelf – runs the entire length of one side of the greenhouse 10" wide
- Bottom/Table shelf – runs the entire length of one side of the greenhouse 25" wide
- XL Reinforcement kit for very high wind/snow load areas
- Heavy Duty Planter boxes
- Metal plant hooks – very handy!
- T bolts to insert in greenhouse channels – helpful if you forget a bolt here or there during assembly – or to attach items after the greenhouse is assembled.
- Ventilation:
    - Additional roof vents may be added, but this is best done on initial assembly as you will need to remove a long panel and cut it to allow for the additional roof vent (and the roof vent panel itself) and then reassemble the greenhouse.
    - Exhaust fan/Intake vent may be installed in the gables of the greenhouse to blow out the hottest air. Many exhaust fans will use an external thermostat to control at what temperature it turns on and off. Place an exhaust fan opposite your louver

window to create a cross breeze. For the most effective cross breeze, it is often recommended to close window vents to force airflow through your intake vent.

- Heaters

Additional Weather Considerations and Maintenance of Greenhouse

The following will help keep your greenhouse in tip top shape:

- **WINTER/SNOW/ICE CONSIDERATIONS:** Please take the proper precautions to protect your investment from heavy snow.
    - The roof should be cleared of heavy snow when possible, this removes weight from the roof and also allows the sun to shine in and heat your greenhouse
    - Heating your greenhouse may also help some of the snow melt/slide off to assist in keeping the roof clear. If you are heating the greenhouse, you may wish to disengage your pistons so the roof vents do not open. If you disengage the openers, it is recommended to lock your sash locks.
- **HIGH WIND AREA CONSIDERATIONS:** It is recommended to install your greenhouse in an area protected from high winds. We do have wind cables to protect your auto openers from wind damage.
- Pistons and openers - Several times each year oil your piston rods, threading, and moving parts of your openers. You may use WD40 or even olive oil. If your pistons stop opening your windows, you likely need to oil them to loosen them up. See also section on auto openers for troubleshooting tips.
- It is recommended to clean your greenhouse once or twice a year, check moving parts and oil if necessary.
- **This structure is first and foremost a greenhouse and is not guaranteed against drips, drops and leaks which are acceptable in a greenhouse environment. If you are experiencing significant leaks, it is likely due to incorrect caulking of the components as noted in the manual – or missing gaskets. Please pay close attention when sealing your roof vents, crossbars and doors. You will likely want to seal between your greenhouse and concrete foundation or knee wall to prevent water seepage under the frame.**
- Polycarbonate Care & Maintenance (see next section for important information about polycarbonate)
    - It is very normal for greenhouses to collet a lot of condensation due to warm humid air inside and cold air outdoors. This humidity does often seep through/into the polycarbonate channels. You may see condensation in the channels. This is normal and will not affect the performance of your greenhouse. Often this will “burn off” when the sun comes out.
    - Cleaning - use a gentle cleaner, such as Palmolive dish soap with a soft cloth. A squeegee with a long handle is helpful as well.

Questions? Need Assembly Support?

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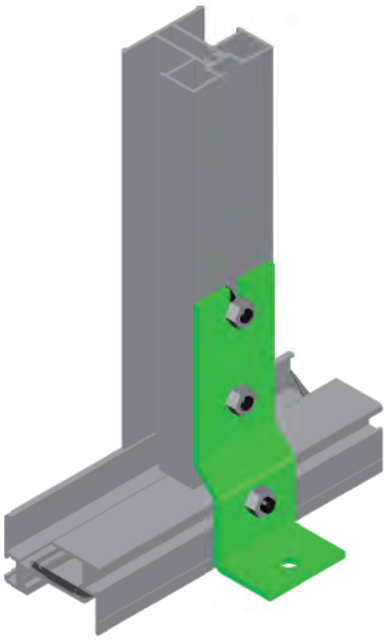
Options for Foundation/Anchoring the Riga XL Greenhouse

Your greenhouse MUST be anchored. Here is a BASIC OVERVIEW of the two options (more specific instructions follow later):

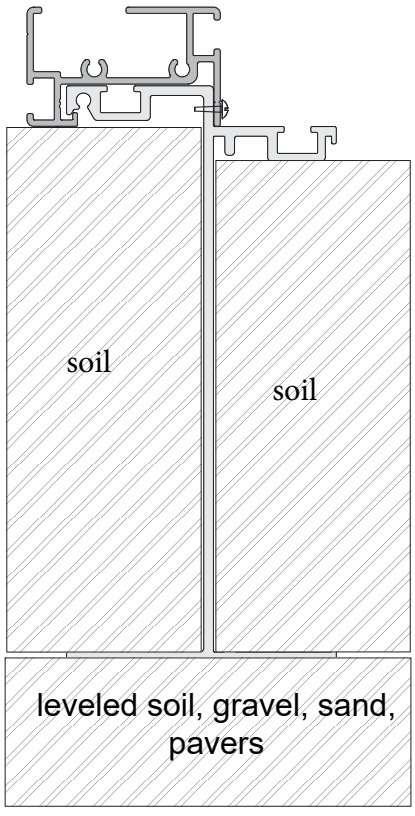
Option A: Attach the greenhouse to your own foundation or anchoring system.

The greenhouse kit includes L brackets that attach to the vertical studs and then have a hole at the bottom to secure to your existing foundation/anchoring system. The recommended foundation in this case is a continuous concrete strip foundation to support the length of the base and allow anchoring with the appropriate hardware. The anchors/bolts/wedges are NOT included in the kit as they will vary based on the composition of your foundation. Please note with this method, you will need to seal between the soil profile and your foundation to prevent water from seeping under the frame of the greenhouse.
Note: This anchoring method is used when placing the greenhouse on a 20" high kneewall with purchase of a drop door kit.



Option B: Anchor using Riga XL foundation frame (optional accessory - please order with greenhouse shipment!).

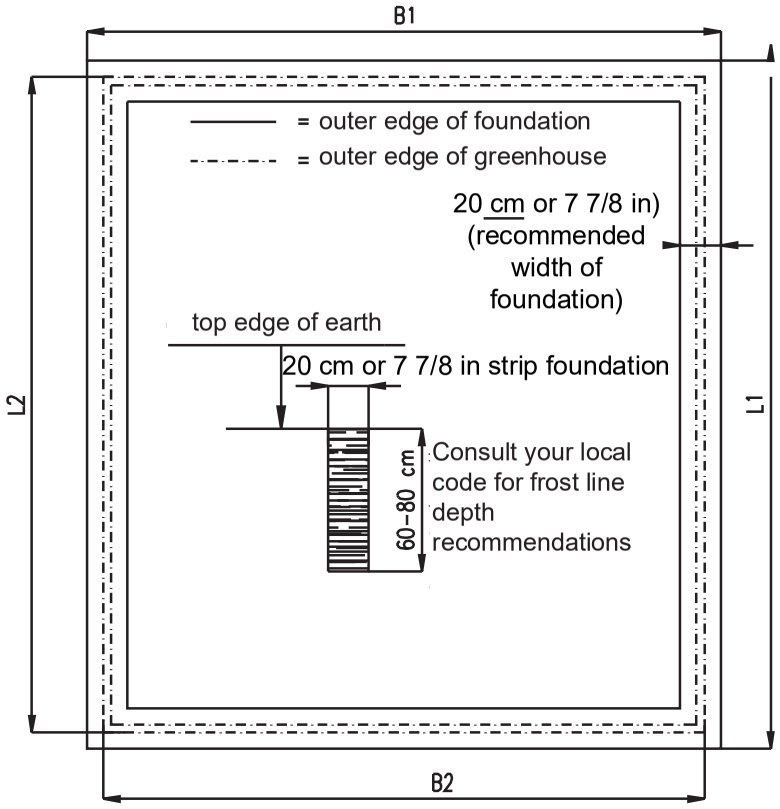
This is the easiest and safest way to anchor your greenhouse. To use this option, you will need to dig a trench 4-5" deep at the perimeter of the greenhouse. The I beam-shaped foundation frame will be buried in this trench on all 4 sides of the greenhouse and offer a secure anchor for the greenhouse without the need for concrete work. If you are using this method, please read through the full instructions to understand the process to avoid having to undo/redo steps.



Foundation Plan Riga XL

Construction of your greenhouse with a concrete perimeter or strip foundation:
If you did not buy a foundation frame, the greenhouse has to be erected safely by means of a perimeter/strip foundation. Please build this according to the dimensions in the chart below. You may also attach the greenhouse to a full concrete slab if desired - consider texture and drainage. The foundation must be even and level where the frame will sit.
Fasten the constructed greenhouse with the supplied angle brackets and stainless steel TapCon (or similar) screws. We recommend 2.5 to 3" length with anchor diameter of 1/4". TapCon screws are not included and may be found at your local hardware with correct drill bit included.

Diagram below illustrates a sample concrete strip foundation:



If you are using the optional foundation frame: Center your 5" deep trench 2" inset from the exterior dimensions of the greenhouse (B2,L2) in the chart below. It is easist to work and level if the trench is at least 7" or more wide.

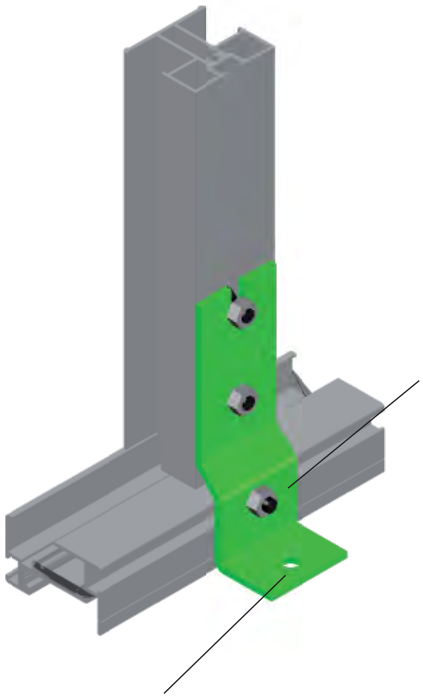
Door Extension Kit (Drop Door/Stem Wall): If you are placing your greenhouse on a stem wall, you will need a door extension kit and your wall must be 20" high. The XL greenhouses have a front and back door, which is centered on the gable wall. The rough opening for the door needs to be: 40 7/8" - better to make it 41" .
When building your stem wall, use the exterior dimensions of the greenhouse for the exterior dimensions of your wall - this will ensure your doors will open fully and connect with the door catch. The floor profile which will sit on your wall is 2" wide with L bracket anchor (1") for total of 3". Please be sure that the thickness of your wall allows for secure anchoring on the interior and meets local building standards.

	foundation		greenhouse exterior	
	B1	L1	B2	L2
Riga XL/5	442 cm 174 in	519 cm 204 5/16 in	425 cm 167 3/4 in	501 cm 197 1/4 in
Riga XL/6	442 cm 174 in	618 cm 243 5/16 in	425 cm 167 3/4 in	601 cm 236 5/8 in
Riga XL/7	442 cm 174 in	718 cm 282 11/16 in	425 cm 167 3/4 in	701 cm 276 in
Riga XL/8	442 cm 174 in	818 cm 322 1/16 in	425 cm 167 3/4 in	801 cm 315 3/8 in
Riga XL/9	442 cm 174 in	918 cm 361 7/16 in	425 cm 167 3/4 in	901 cm 354 3/4 in

Option A Instructions: Anchoring to your own foundation

Mounting brackets are included to attach base/floor profile to existing foundation.

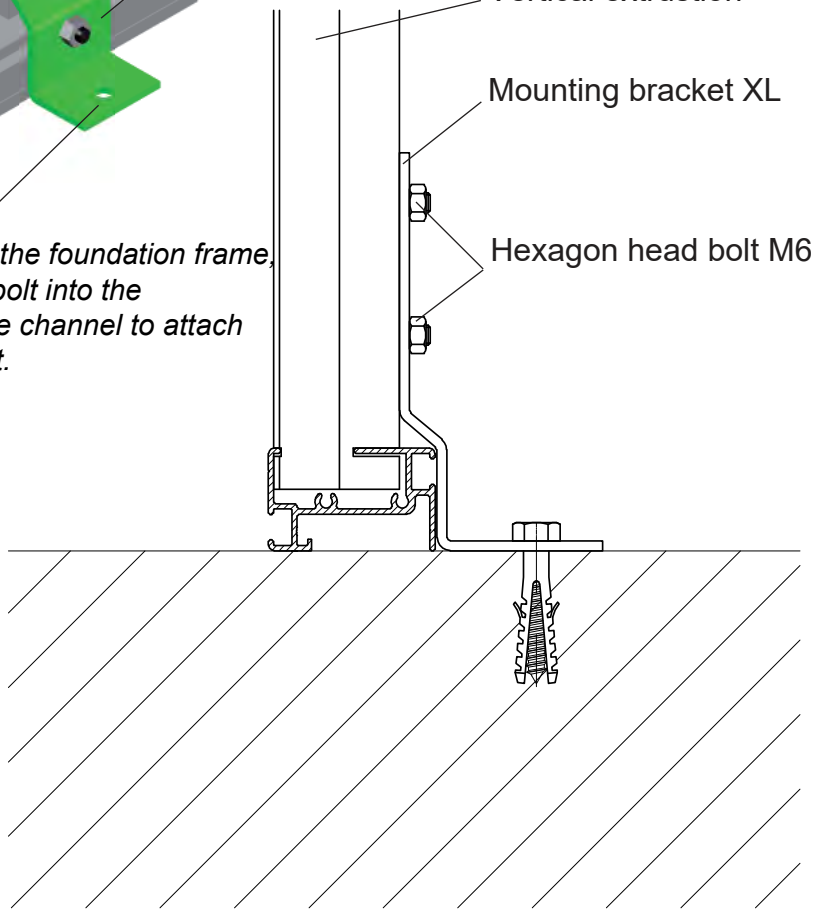
Part design	Pos.	Description	Quantity/Measurement (mm)				
			XL 5	XL 6	XL 7	XL 8	XL 9
	6.7	Mounting brackets XL	16	18	20	22	24
	117	Hexagon head screw M6 x 12 + nut M6	64	72	80	88	96



Note:
You will need to insert 2 bolts (M6 x 12) in each vertical profile (gable ends and curved profiles) to attach mounting brackets.

***Optional**: If desired, you may add an extra hole for an additional bolt to attach the mounting bracket to the soil profile.*

If you are using the foundation frame, please insert a bolt into the foundation frame channel to attach bracket with bolt.

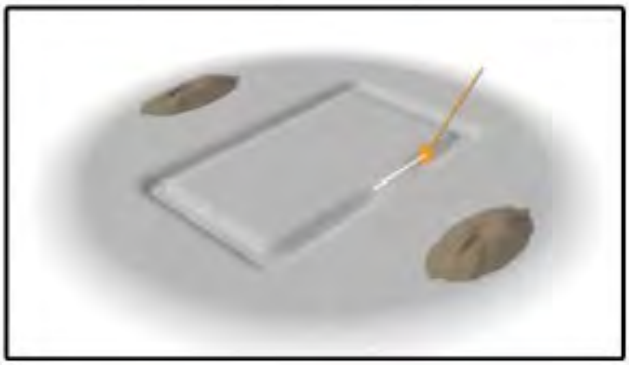


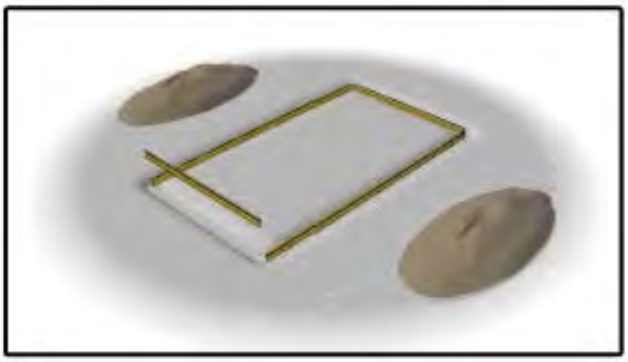
To anchor to concrete, we recommend TapCon screws 2.5 – 3” length, with the anchor diameter (drill bit should be included). TapCon screws are not included, but are available at local hardware stores. If you are in high wind areas you may choose heftier anchoring hardware.

Optional Accessory: Foundation Frame
Basic Preparation Steps- this is intended to give you an overview of the whole process before beginning.

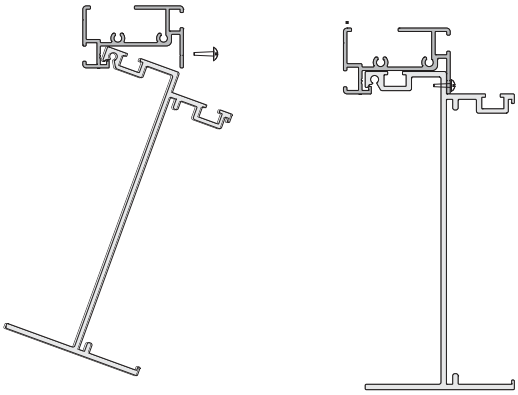
Parts needed: 4 foundation frames (2 gable, 2 long sides), 4 soil profiles (2 gable, 2 long sides), 4 Black Soil profile corner connectors, handful of self-tapping screws (in a separate plastic baggie in the shipment).

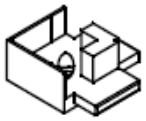
You will find more detailed and labeled drawings on the following assembly pages, but this gives you the best overview of the process.





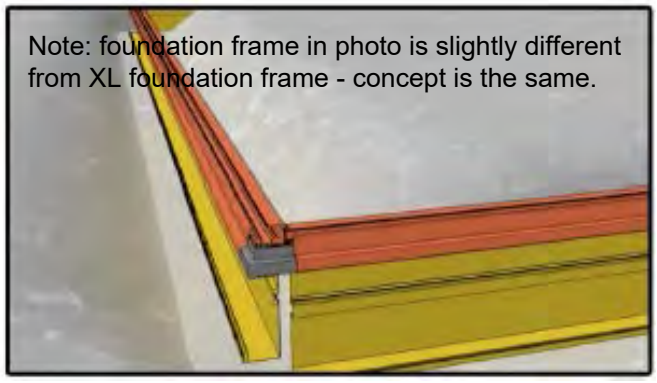
1. Dig a 4-5” deep trench inset 2" from the exterior dimensions of the greenhouse. It can helpful to place paving stones or gravel under the horizontal sections of the greenhouse to reduce the potential for sagging if the ground shifts.
2. Place the foundation frame in the trench. This is a good time to check if your trench is level! Starting with a level trench is key to a smoother assembly!
3. Hook/Rotate the soil profile onto the foundation frame (center the soil profile lengthwise over the foundation frame – note the foundation frame is intentionally shorter than the soil profile) and attach the corners of the soil profiles using the black plastic corner connectors.
4. Attach the soil profile to the foundation frame using self-tapping screws – this is to make it easier to work with as one piece.
5. Ensure your frame is level and square in the trench.





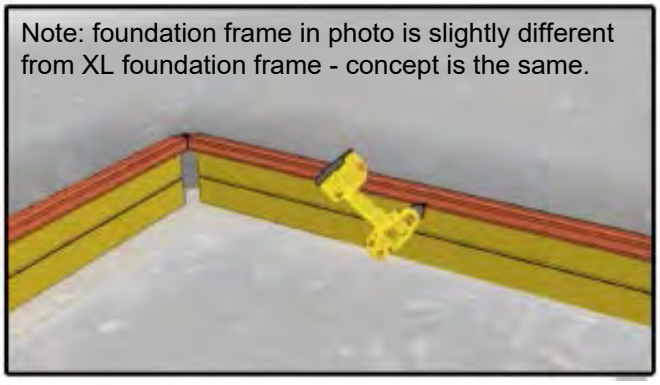
Black corner connector
(to attach soil profiles)

6. Measure diagonally from corner to corner, they should be equal. Place a level on all four sides to check. Adjust trench/pieces as needed.

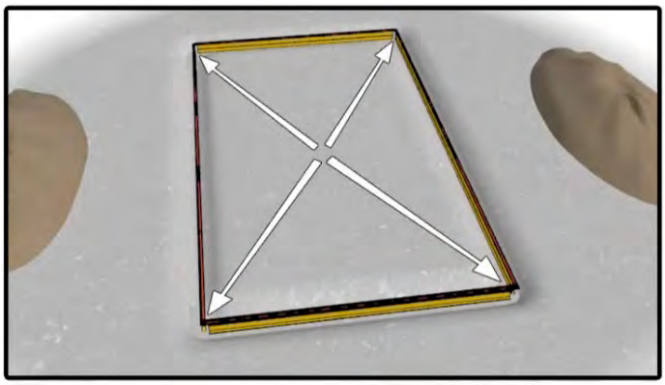


7. Back fill the long sides ONLY of the of the foundation frame with soil.

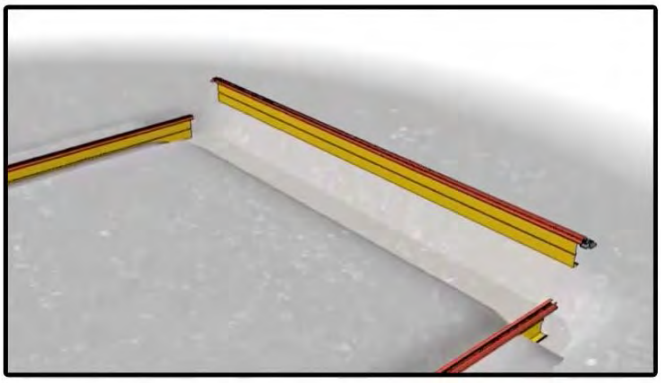
8. Detach the two shorter gable ends and remove from the trench.



9. Continue with assembly of the greenhouse – i.e. roof vents, doors, window, front and rear gable. When assembling front and rear gable your will work with the soil profile/foundation frame as one piece. This also applies when erecting the long sides of the structure.



10. Once the full structure is assembled, you will connect the hold down straps to the vertical studs and foundation frame with supplied nuts/bolts.

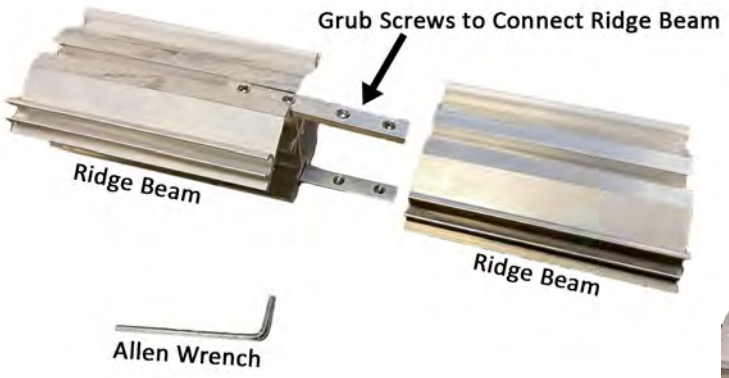


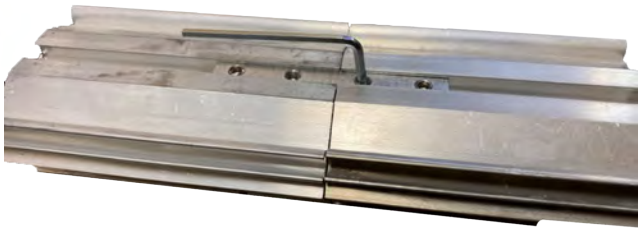
11. Finally, backfill the trench with soil around all 4 sides – inside and outside to anchor the greenhouse.

Optional Foundation Frame Assembly

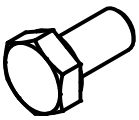
(this may or may not be part of your kit)

Note: For XL 7,8,9 models, the foundation frame will come in segments that will need to be connected with set/grub screw connectors. similar to the image below.





Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P054–14–01–00–00–1	Foundation Frame (gable)	2	4084 mm 160 13/13"
2		P054–20–01–00–00–1 P054–15–01–00–00–1 P054–16–01–00–00–1	Foundation Frame (eaves/sides)	2	XL5:(2) 4859mm/191 5/16" XL6:(2)5853mm/ 230 7/16" XL7:(2)6848mm/269 5/8" XL8:(2)7843mm/308 3/4" XL9:(2)8838mm/347 15/16"
3		9999000695	Mounting bracket	18	
4		9999000124	Bolt M6 x 12mm	54	DIN 933
5		9999000128	Nut M6	54	DIN 934
6					

OPTION B (Overview): Using the Foundation Frame (optional accessory)

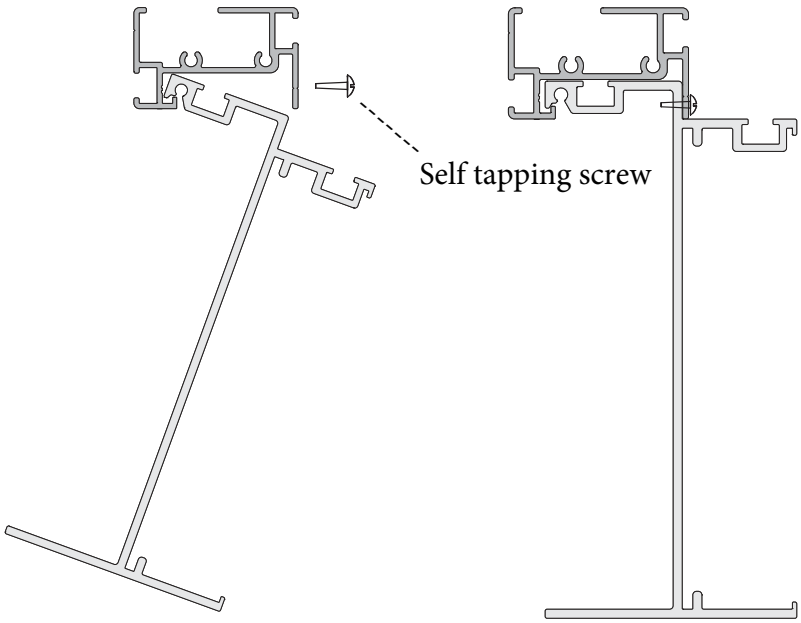
Note: For XL 7,8,9 models, the foundation frame will come in segments that will need to be connected with set/grub screw connectors. (see pg. 10) to make full lengths.

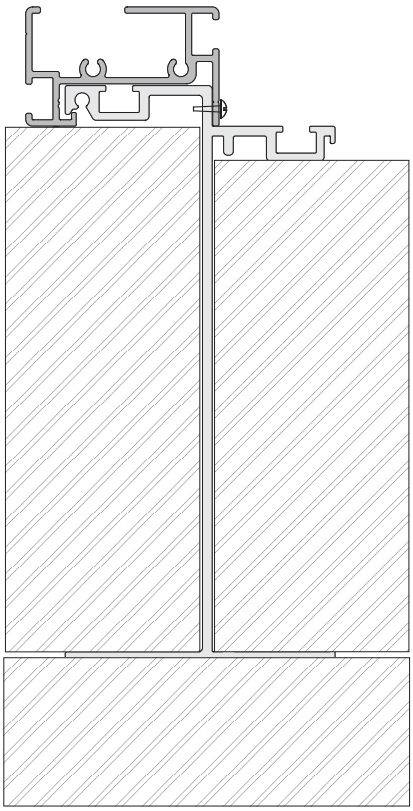
IMPORTANT: Complete steps 1 & 2 BEFORE assembling gable ends or sidewalls. The foundation frame attaches to the soil profile first, and then assembly proceeds as though they are one piece.

Assembly of foundation frame

Note: Foundation frame profiles are shorter than the floor profiles!

1. 2. 3.





1. First hook the foundation frame into the soil profile, then rotate it into position.
   Note: Make sure the foundation frame pieces are centered in the soil profile. The foundation frame will be shorter in length than the soil profiles.

2. Once in position use small self tapping screws to secure the foundation frame to the soil profile. This is shown above. The self-tapping screws temporarily tack the floor profile & foundation frame together during assembly to make it easier to work with. Mounting brackets will be added later to secure it fully. Self-tapping screws will be found in the padded mailer envelope that was included with your greenhouse. If you cannot locate them - you may use any screw to temporarily tack the pieces together.

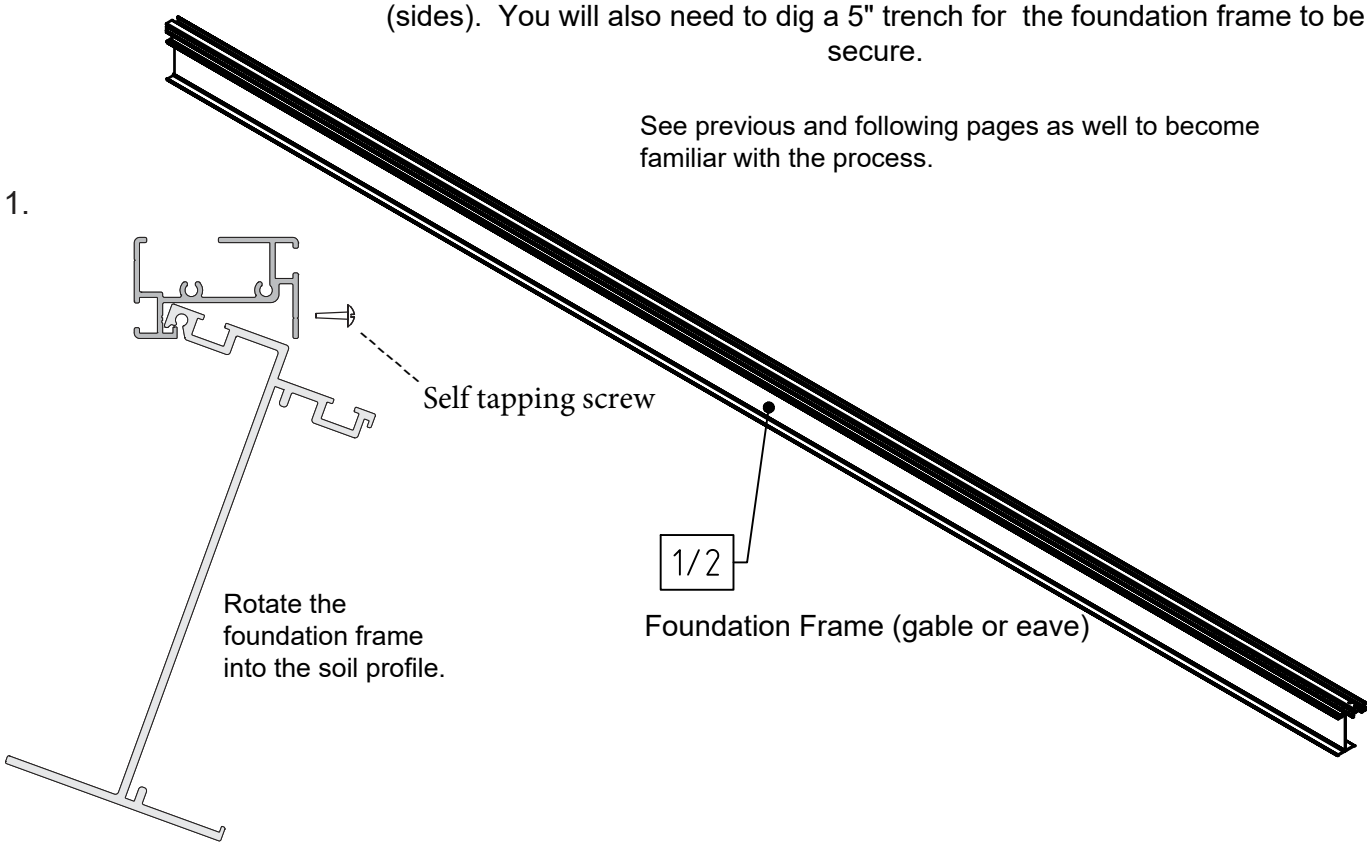
3. Continue with greenhouse assembly, using the connected soil profile/foundation frame as one piece. It can be helpful to partially backfill your trench to secure your sides while assembling. When the greenhouse has been fully assembled fully backfill both sides of the foundation frame with soil, or your media of choice.

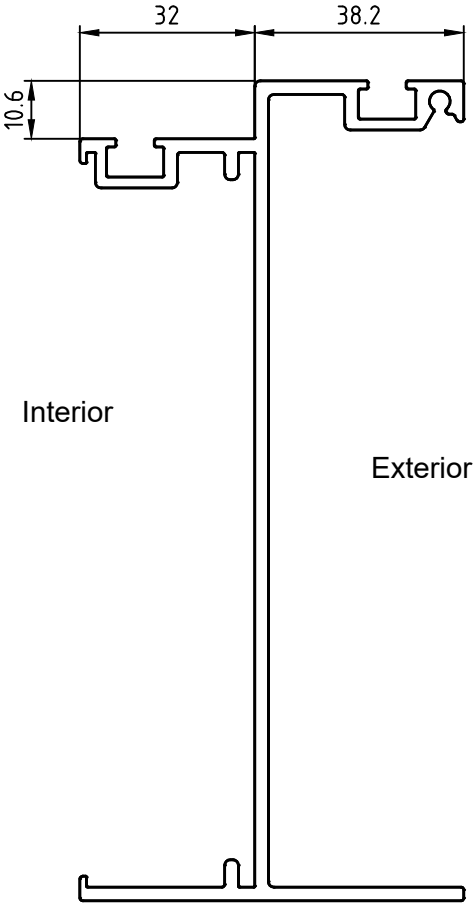
VD Simplified View

If the optional foundation frame is being used, it will need to be connected to all the floor/soil profiles before beginning assembly of the gables or eaves (sides). You will also need to dig a 5" trench for the foundation frame to be secure.

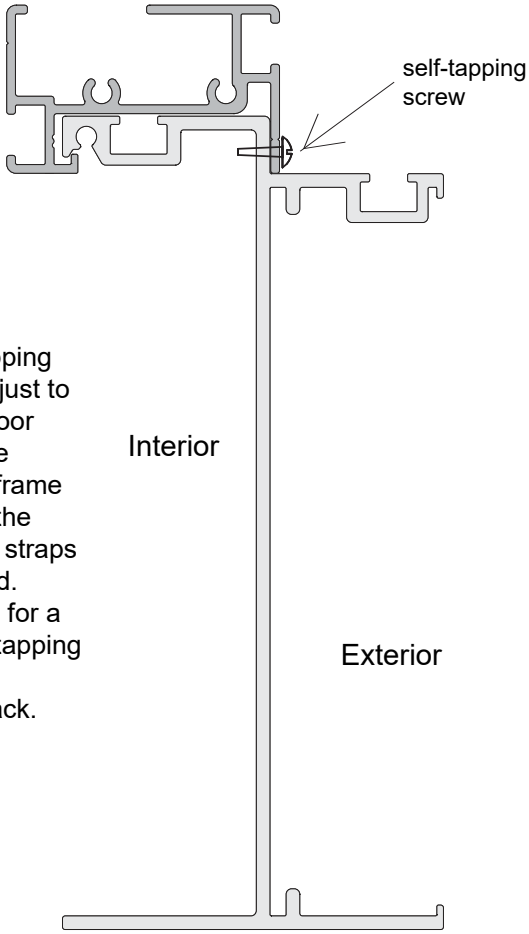
See previous and following pages as well to become familiar with the process.

1.





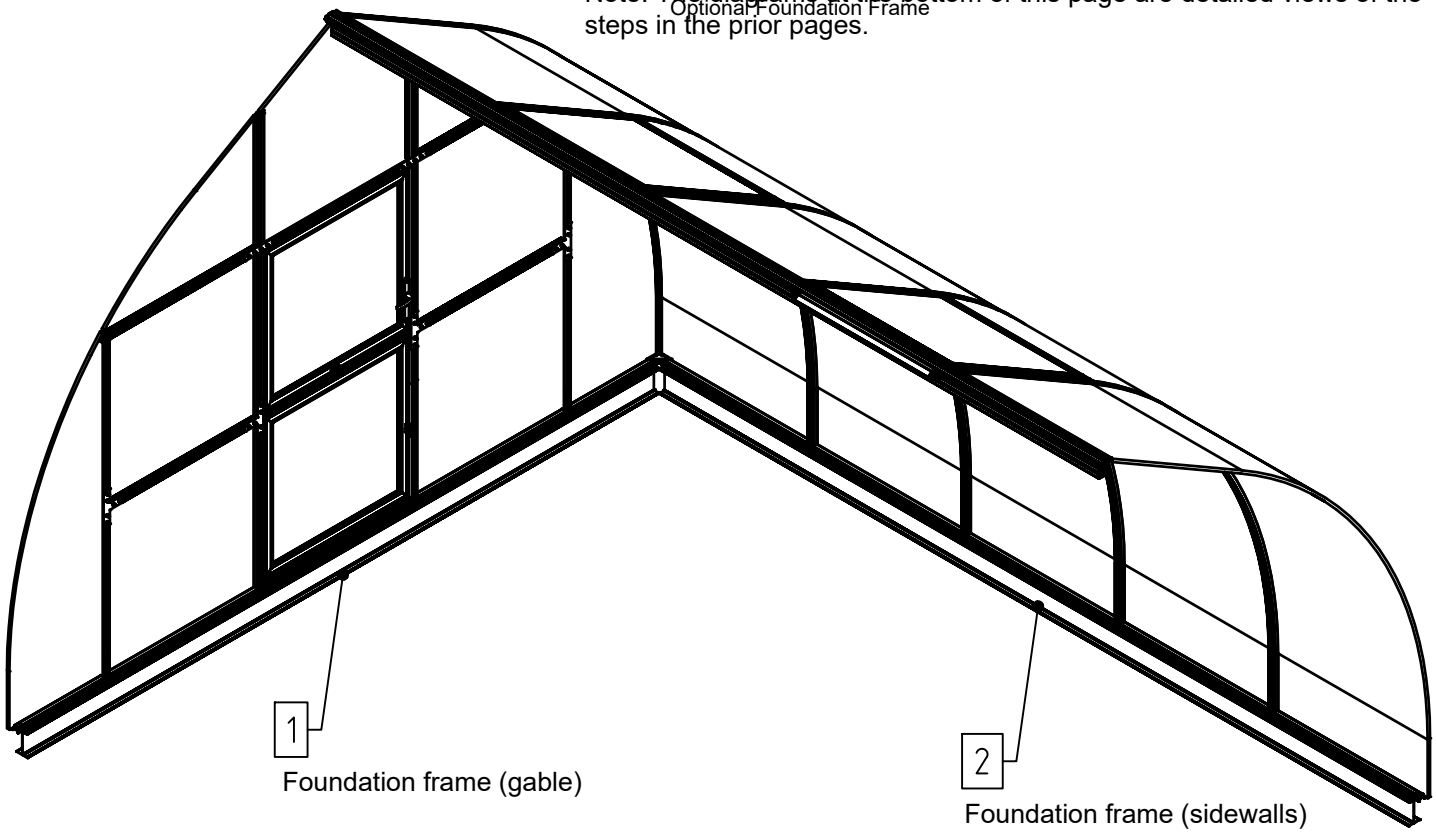
4x (repeat on all four sides)



The self tapping screws are just to "tack" the floor profile to the foundation frame until it is in the ground and straps are attached. Please look for a bag of self-tapping screws in a seperate pack.

Optional Foundation Frame

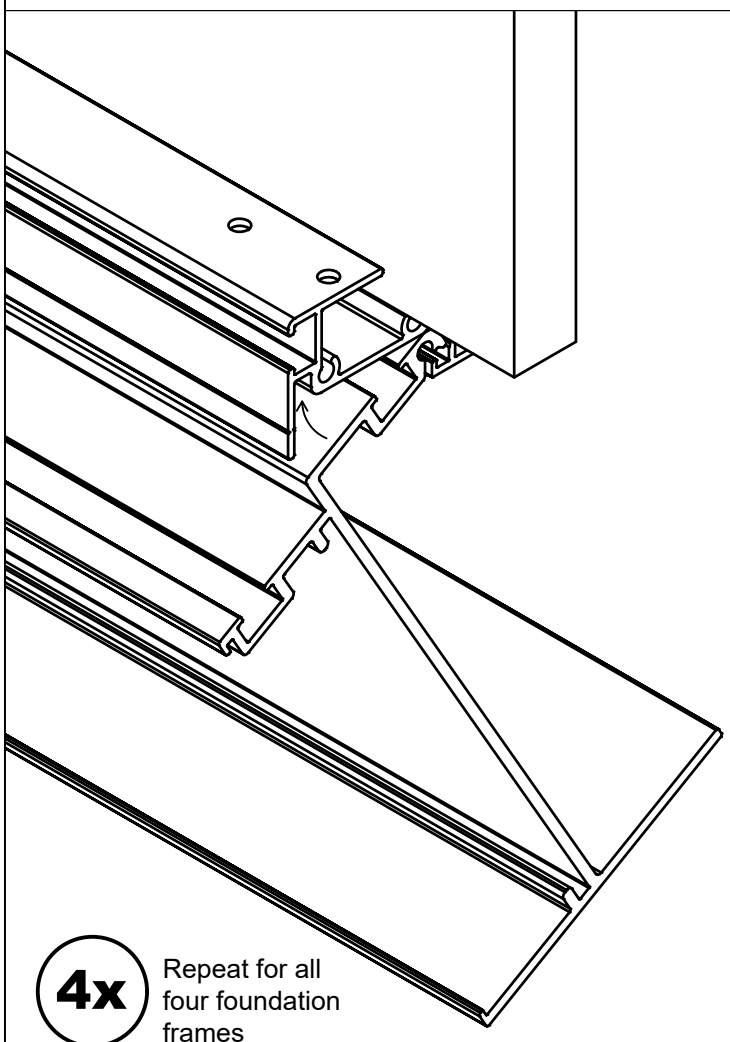
Note: The diagrams at the bottom of this page are detailed views of the steps in the prior pages.



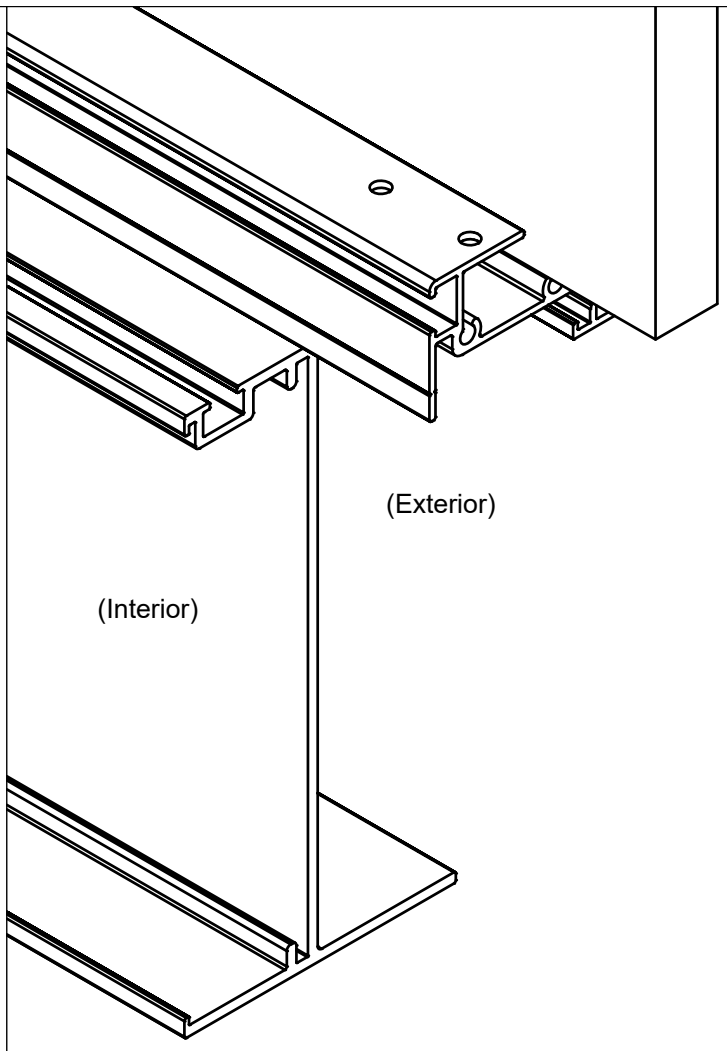
Foundation frame (gable)

Foundation frame (sidewalls)

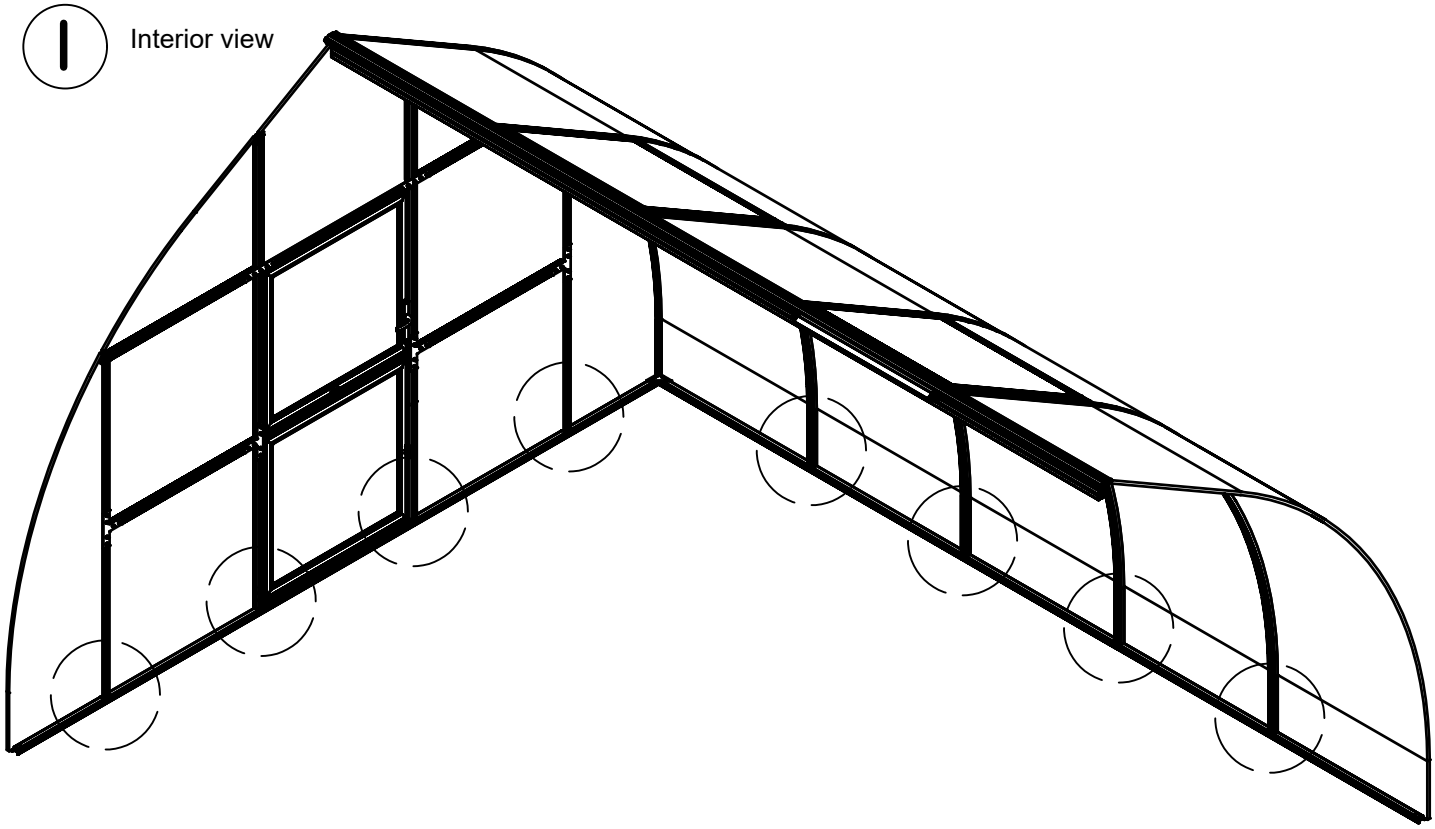
Note: For illustration, the drawings show the foundation frame attaching to the assembled greenhouse - attach the foundation frame BEFORE the structure is assembled, as shown on previous pages.



4x Repeat for all four foundation frames



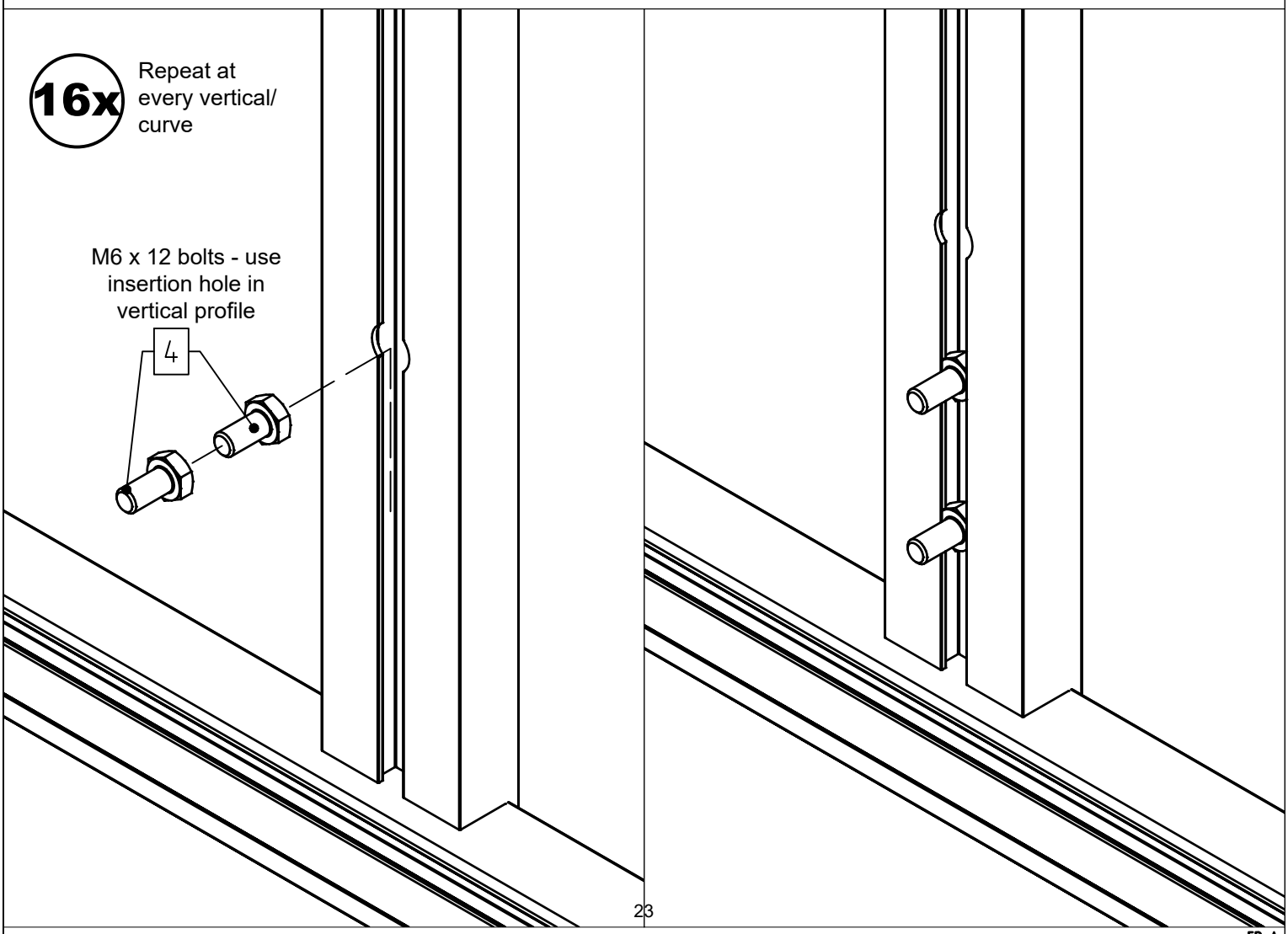
1 Interior view



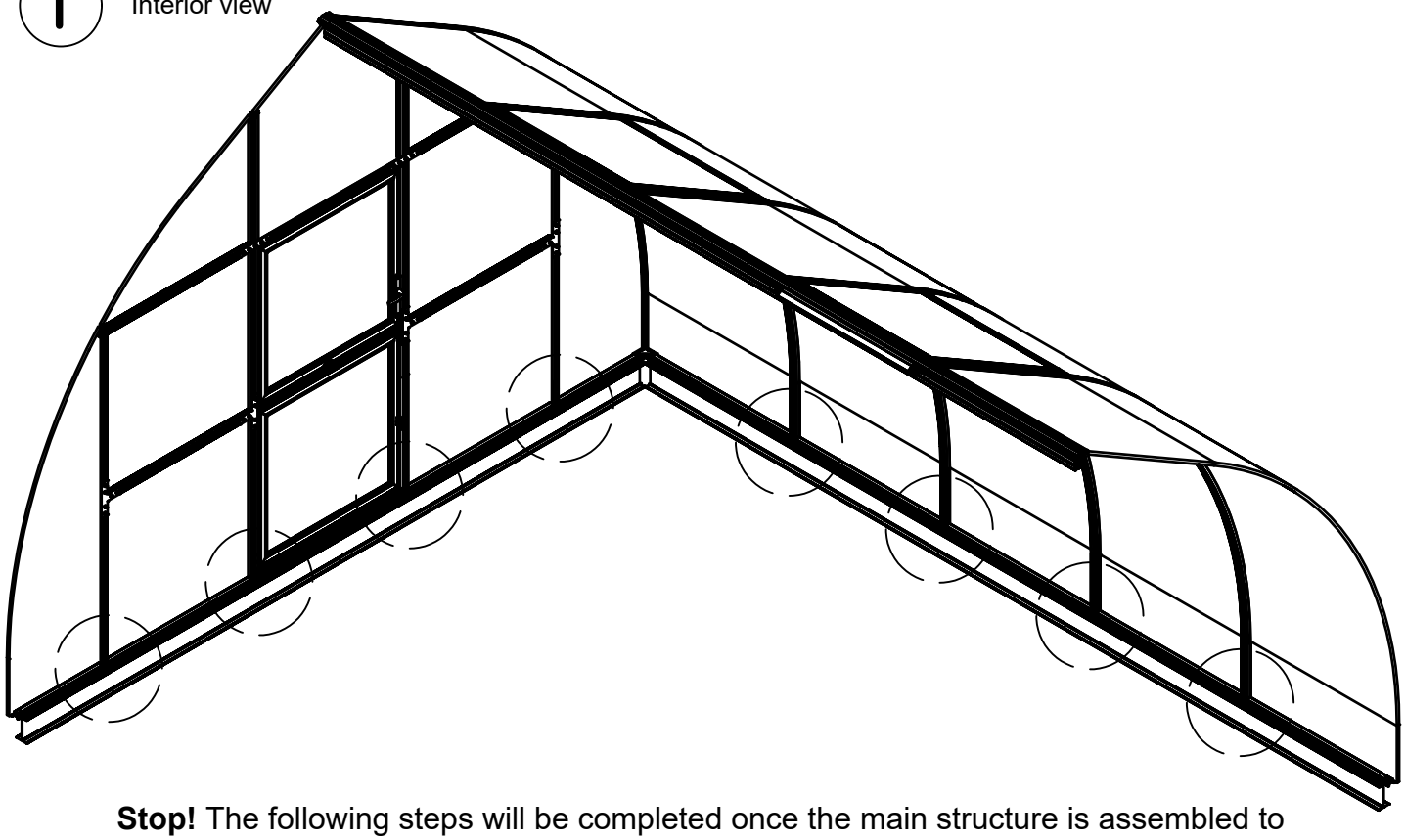
Stop! The following steps will be completed once the main structure is assembled to stabilize and fully connect the greenhouse to the foudation frame!

16x Repeat at every vertical/ curve

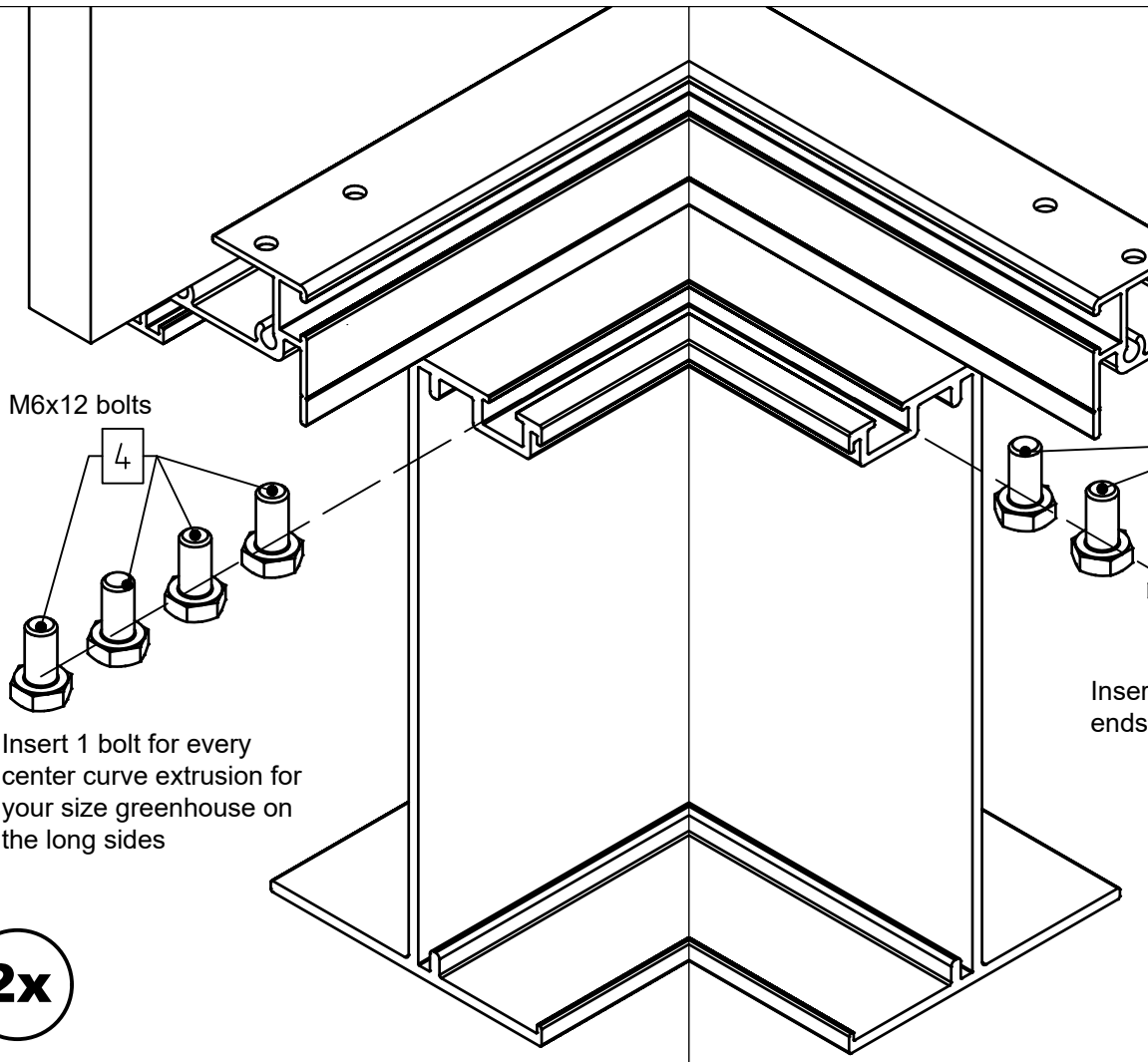
M6 x 12 bolts - use insertion hole in vertical profile



1 Interior view



Stop! The following steps will be completed once the main structure is assembled to stabilize and fully connect the greenhouse to the foudation frame!



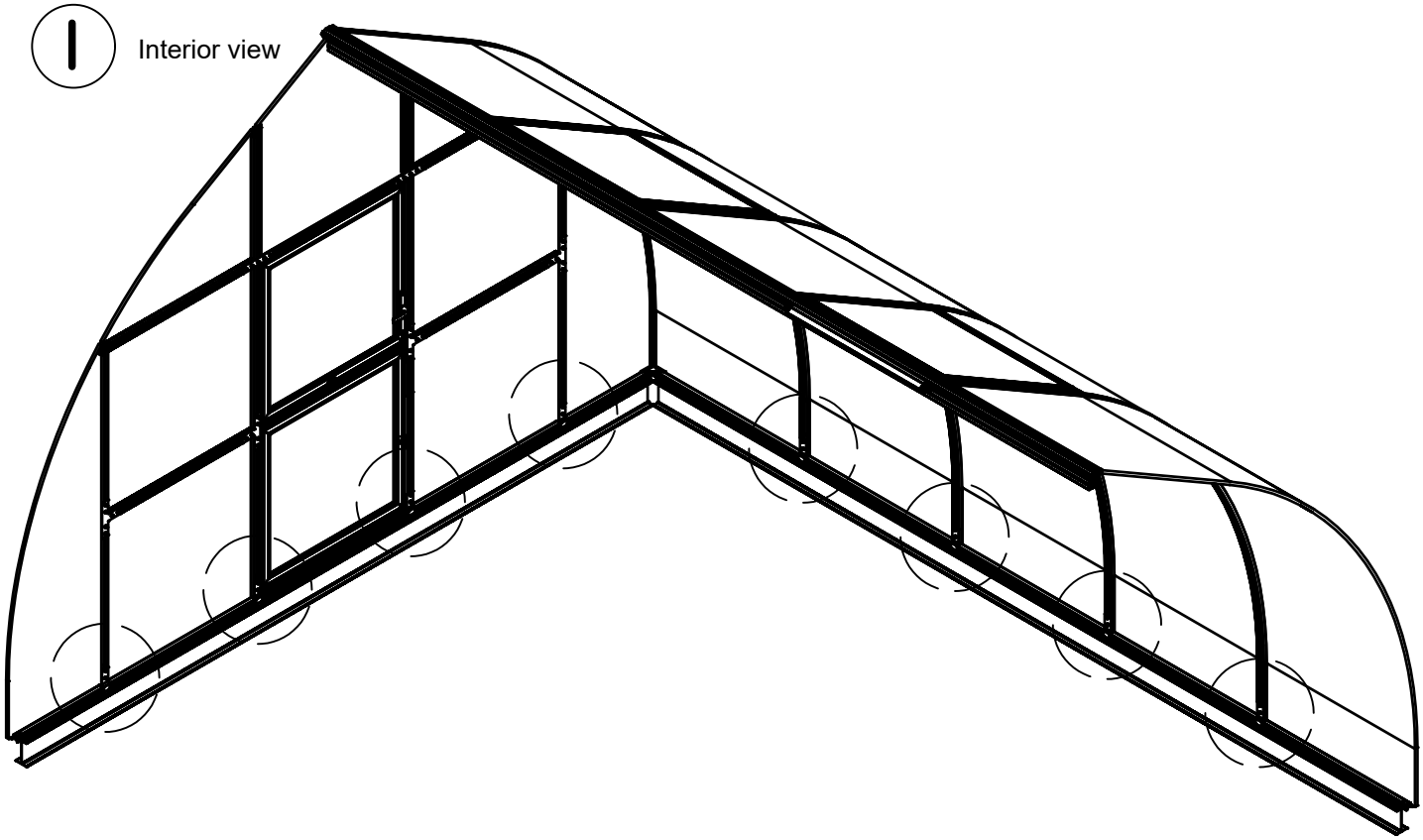
Insert 1 bolt for every center curve extrusion for your size greenhouse on the long sides

Insert 4 bolts for the gable ends.

2x

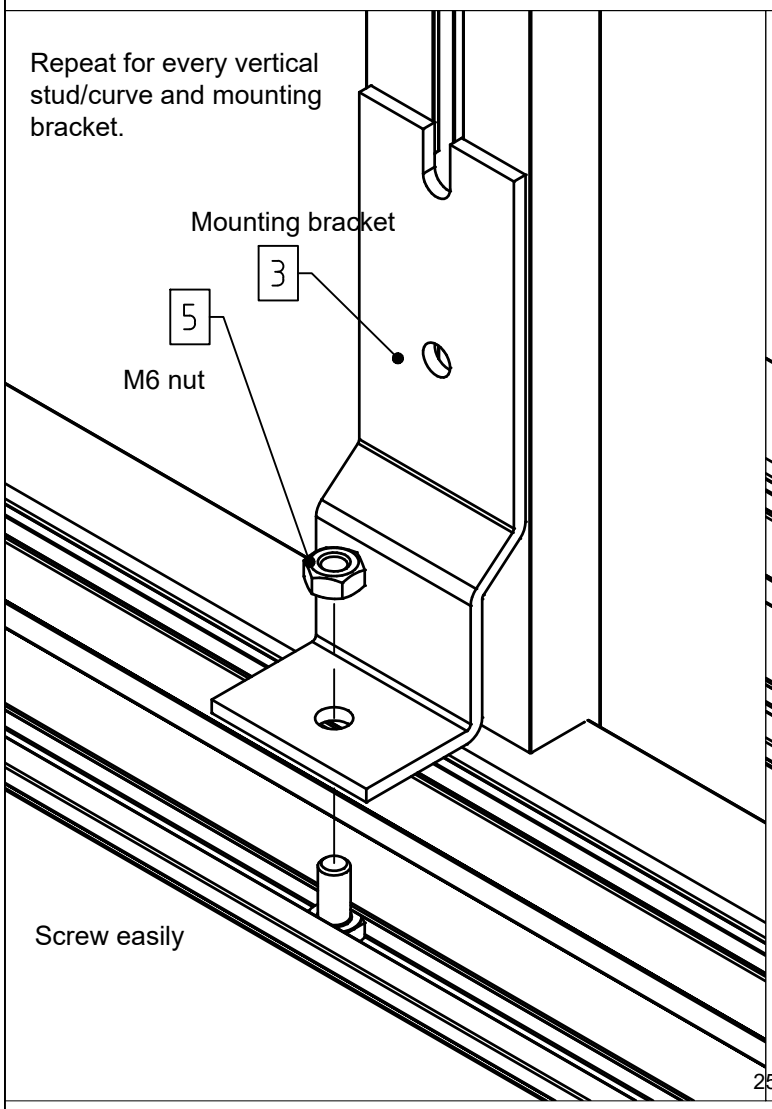
2x

1 Interior view

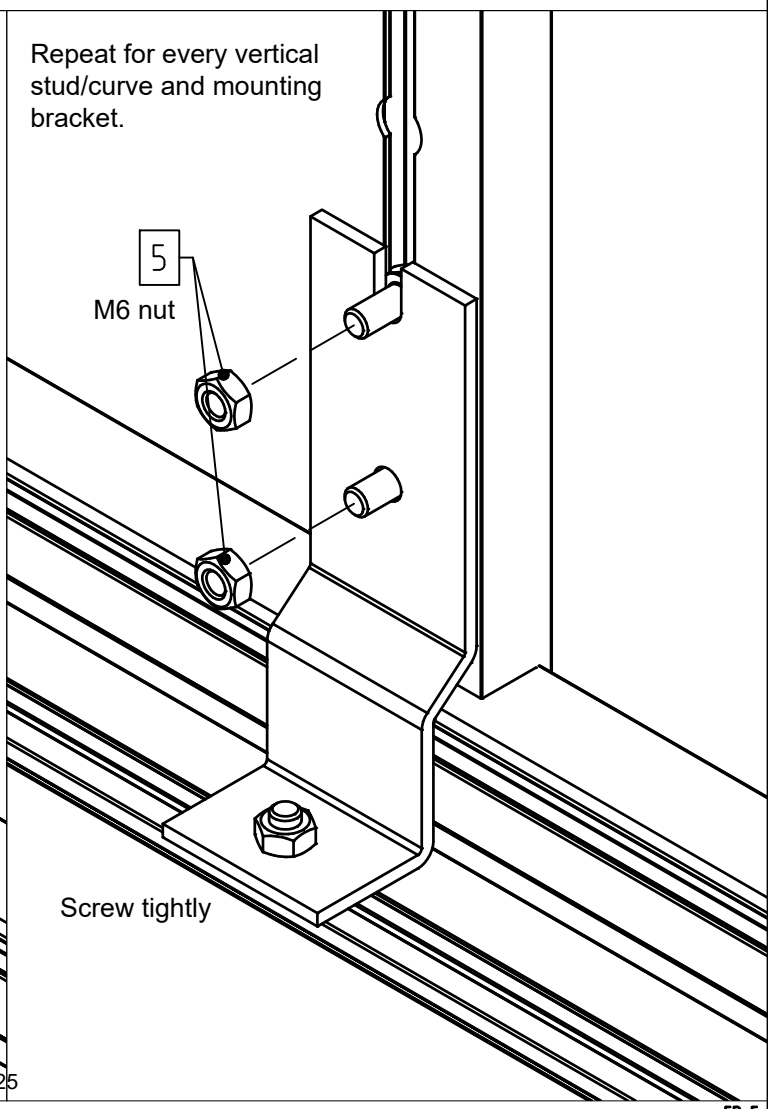


Stop! The following steps will be completed once the main structure is assembled to stabilize and fully connect the greenhouse to the foudation frame!

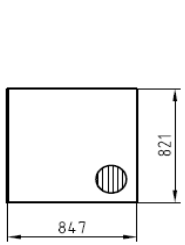
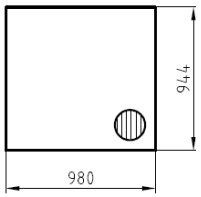
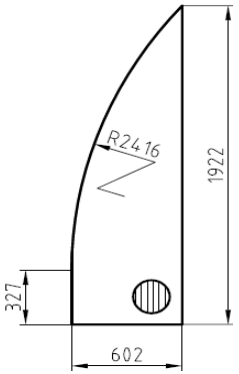
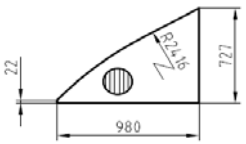
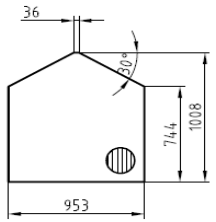
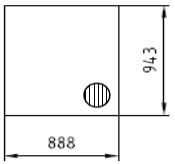
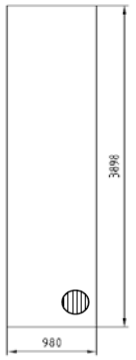
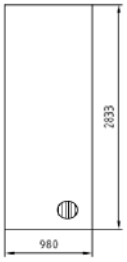
Repeat for every vertical stud/curve and mounting bracket.



Repeat for every vertical stud/curve and mounting bracket.



Riga XL Greenhouse Polycarbonate Count Sheet

Model #	Upper and Lower Door (Front + Rear Gable)	Gable Rectangular Panels	Gable Lower Curve Panel (2 left/2 right)	Gable Upper Curve panel (2 left/2 right)	Gable triangular panel	Roof Vent (window)	Full Sidewall Panel	Sidewall panel under roof vent	OPTIONAL ACCESSORY: Door drop kit poly for header
									
	847mm x 821mm	980mm x 944mm	602mm x 1922mm	980mm x 727mm	953mm x 1008mm	888mm x 943mm	980mm x 3898mm	980mm x 2833mm	953mm x 487mm
	33 3/8" x 32 5/16"	38 9/16" x 37 3/16"	23 11/16" x 75 11/16"	38 9/16" x 28 5/8"	37 1/2" x 39 11/16"	34 15/16" x 37 1/8"	38 9/16" x 153 7/16"	38 9/16" x 111 9/16"	37 1/2" x 19 3/16"
Riga XL 5 14' x 16'5"	Qty 4	Qty 8	Qty 4 (2 left/2 right)	Qty 4 (2 left/2 right)	Qty 2	Qty 4	Qty 6	Qty 4	OPTIONAL UPGRADE!!! Qty 2
Riga XL 6 14' x 19'10"	Qty 4	Qty 8	Qty 4 (2 left/2 right)	Qty 4 (2 left/2 right)	Qty 2	Qty 4	Qty 8	Qty 4	OPTIONAL UPGRADE!!! Qty 2
Riga XL 7 14' x 23'	Qty 4	Qty 8	Qty 4 (2 left/2 right)	Qty 4 (2 left/2 right)	Qty 2	Qty 6	Qty 8	Qty 6	OPTIONAL UPGRADE!!! Qty 2
Riga XL 8 14' x 26'3"	Qty 4	Qty 8	Qty 4 (2 left/2 right)	Qty 4 (2 left/2 right)	Qty 2	Qty 6	Qty 10	Qty 6	OPTIONAL UPGRADE!!! Qty 2
Riga XL 9 14' x 29'6"	Qty 4	Qty 8	Qty 4 (2 left/2 right)	Qty 4 (2 left/2 right)	Qty 2	Qty 8	Qty 10	Qty 8	OPTIONAL UPGRADE!!! Qty 2

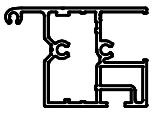
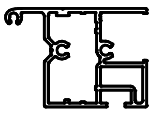
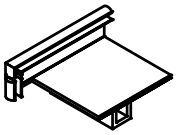
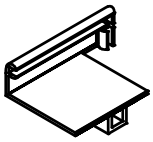
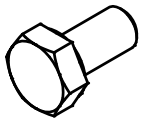
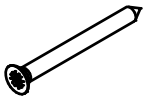
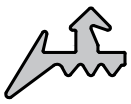
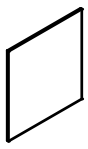
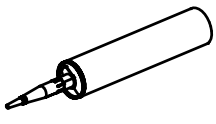
Notes regarding polycarbonate: Loosen the edges only of the protective film for installation - once assembled, pull off the film immediately. **Do not leave the film on for any period of time in the sunlight!** This can burn the film firmly onto the panel.

We recommend sealing the horizontal transitions between glazing and aluminum with neutral cure silicone caulk. This will prevent water and dirt from entering the glazing slots. It is also very important to seal your roof vents - see assembly pages.

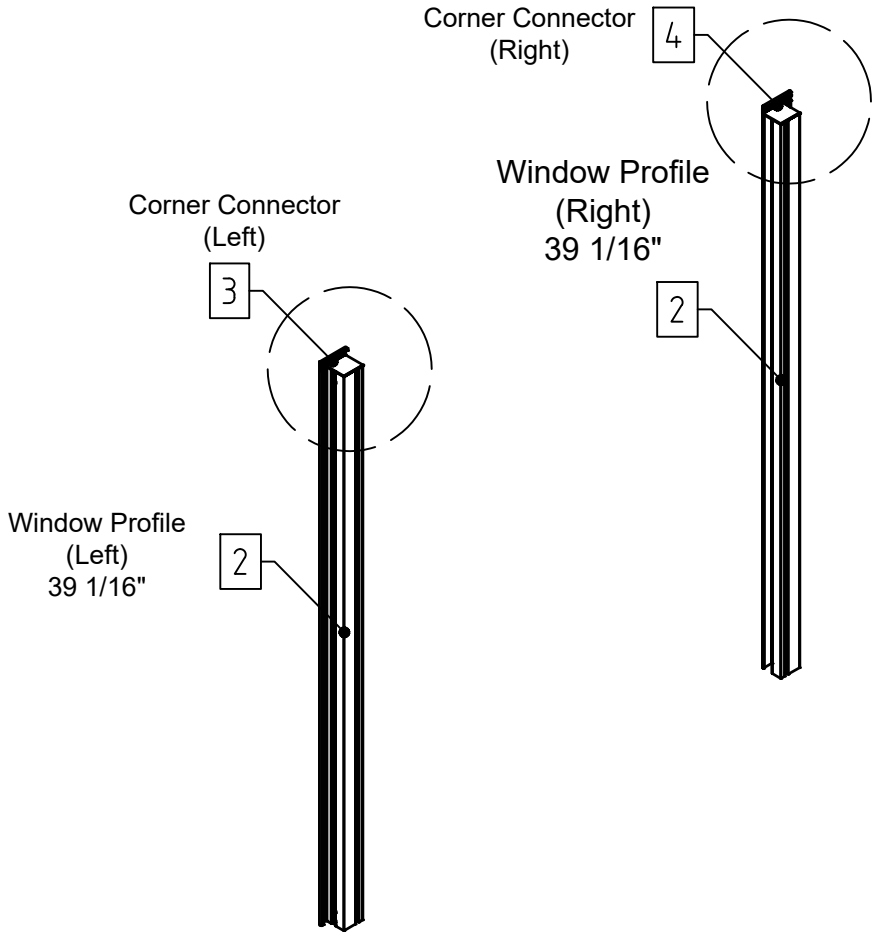
During some weather conditions, condensation can occur within the hollow chambers of the glazing as they are not air tight. The condensation is purely aesthetic and cannot be avoided. The condensation/water vapor will not damage the glazing, even at freezing temperatures. It will usually disapper when the sun warms the channesl and humidity evens out. You may seal additional surfaces with neutral cure silicone caulk.

Roof Vents for RIGA XL

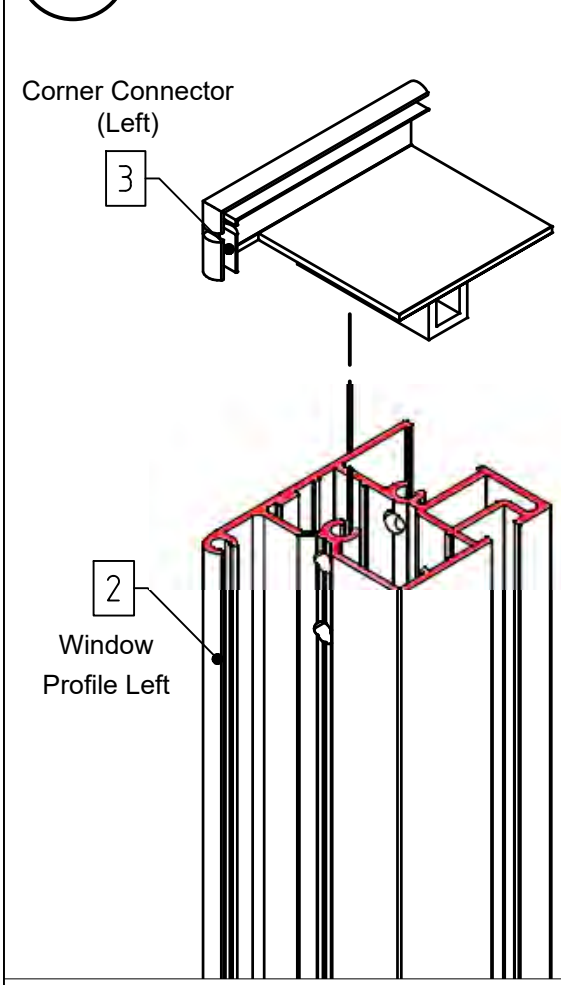
Packlist & Parts

Pos.	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P073–17–01–00–07–1	Window Profile Top & Bottom	2	865 mm 34 1/16"
2		P073–18–01–00–07–1	Window Profile Left & Right	2	993 mm 39 1/16"
3		9999000012	Corner Connector Left	2	
4		9999000010	Corner Connector Right	2	
5		9999000183	Hexagon Screw M6 x 16	2	DIN 933
6		9999000161	Countersunk Screw 4,2 x 60	8	DIN 7982
7		9999000376	Window Seal Gasket 2 mm	1x 974 mm 2x 1027 mm	1x 38 5/16" 2x 40 7/16"
8			Polycarbonate Panel 34.96" x 153.26"	1	
9		10109413	Silicone	1	
10					
11					
12					

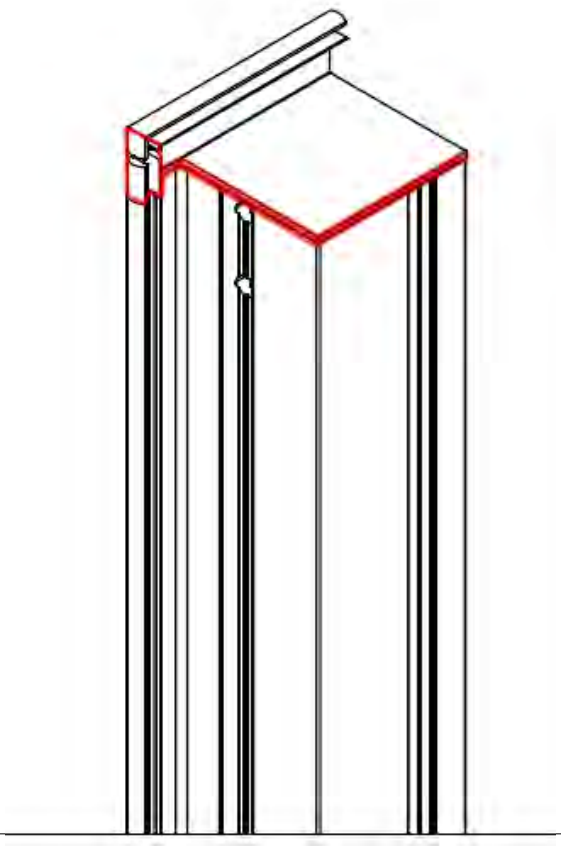
Interior View



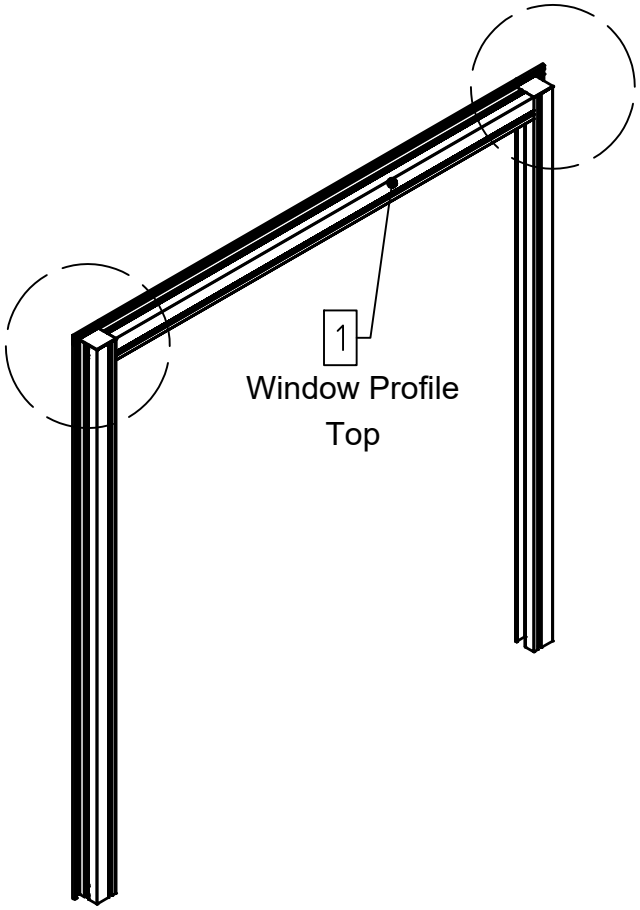
2x Repeat for both side profiles



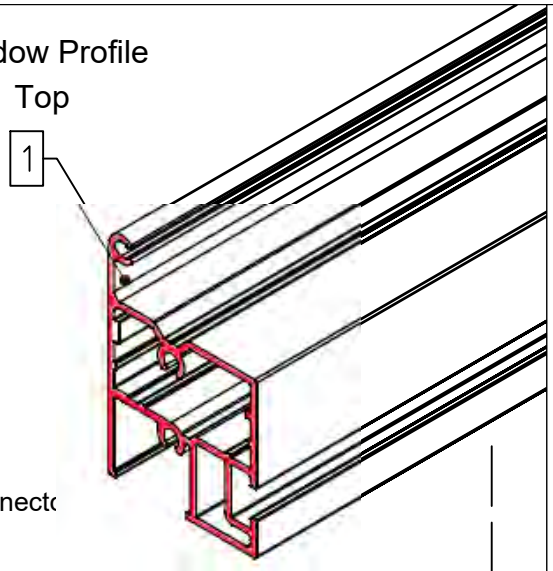
It is recommended to apply silicone on the black corner connectors where they meet the aluminum frame in the next steps. This will help reduce the possibility of drips/leaks. Silicone marked with red lines



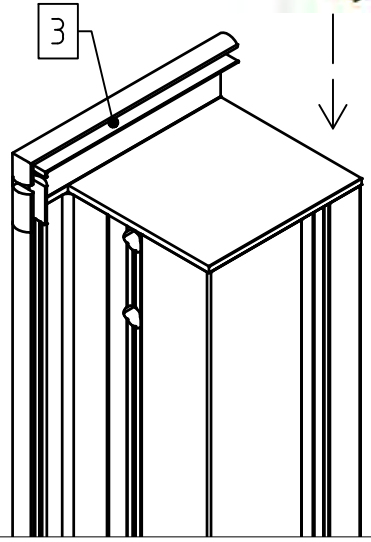
I Interior View



Window Profile
Top

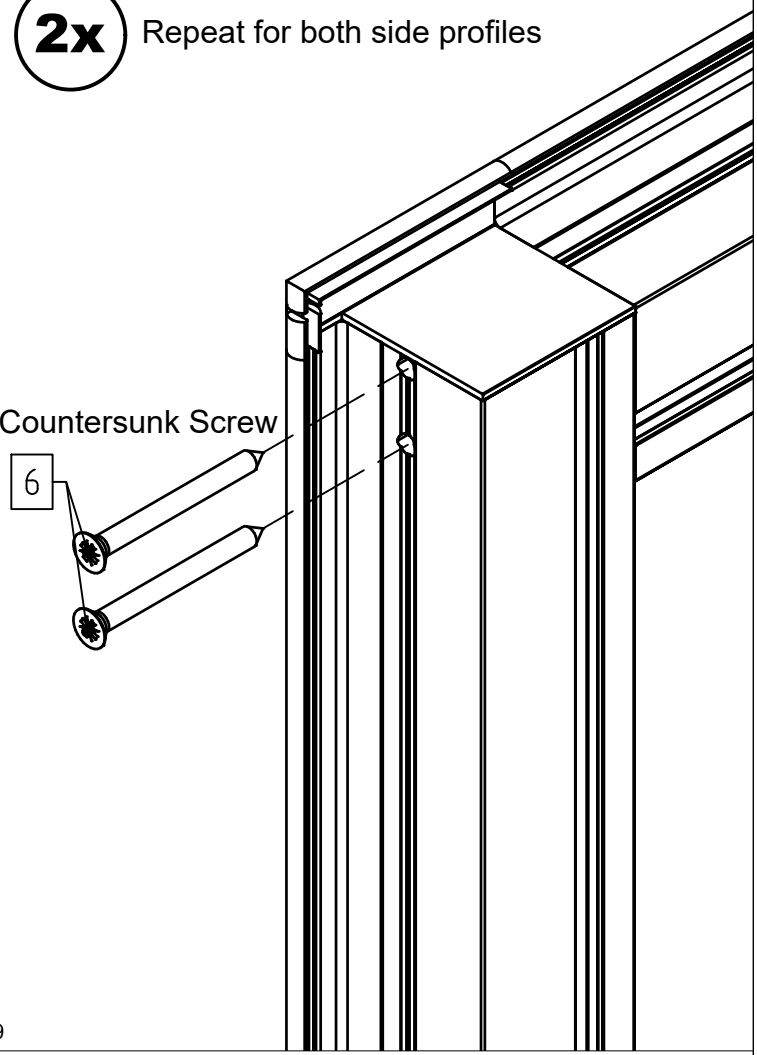


Corner Connecto
(Left)

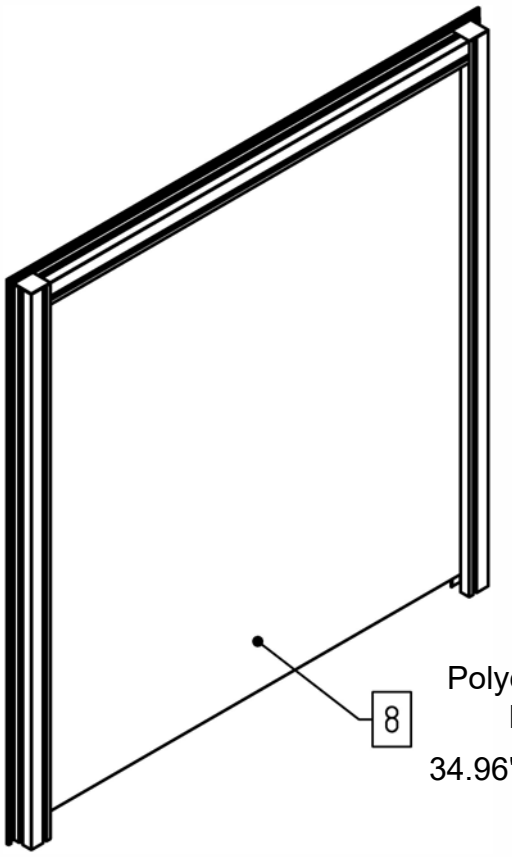


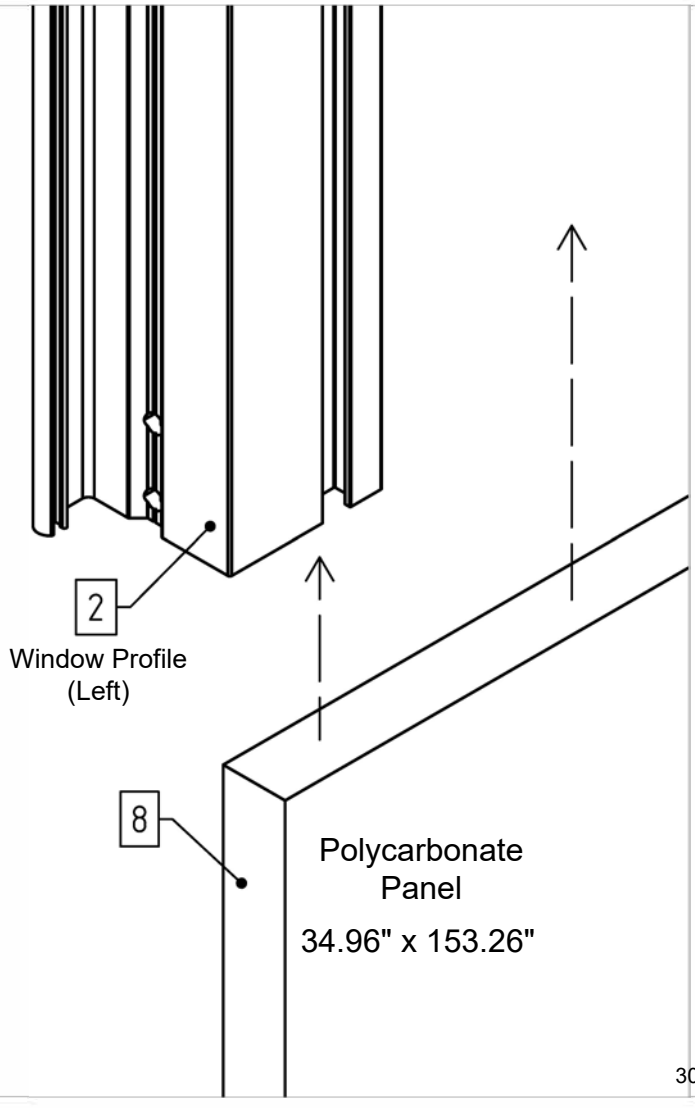
2x Repeat for both side profiles

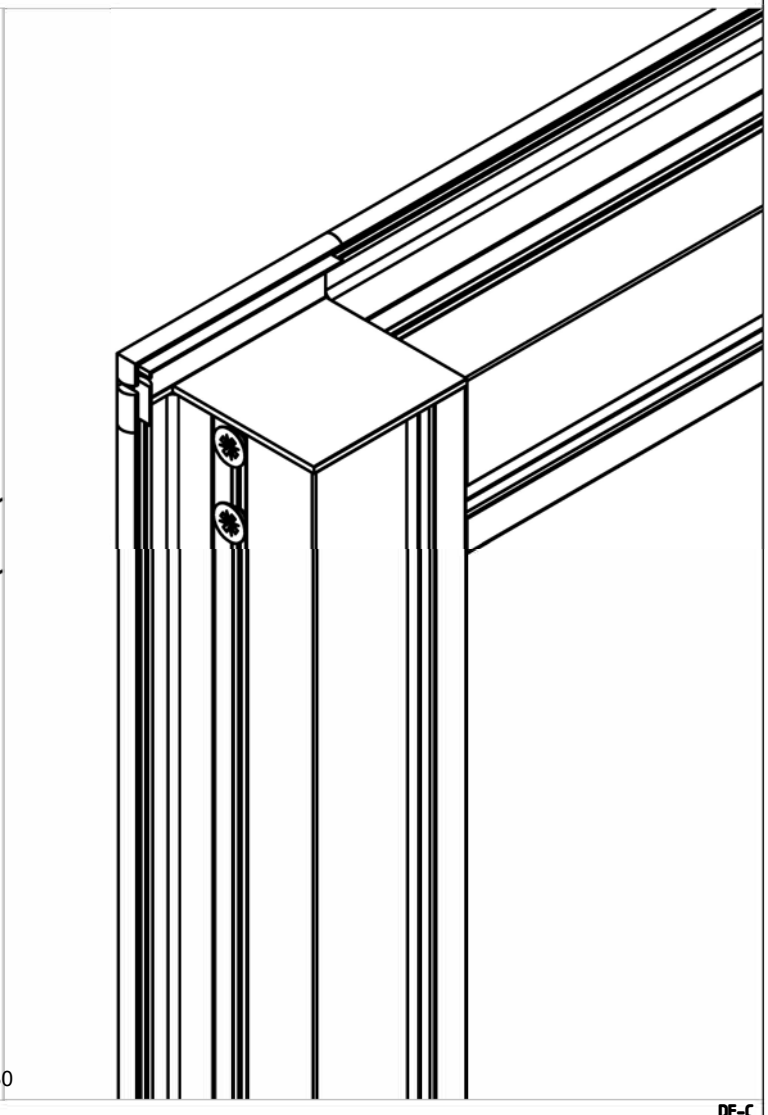
Countersunk Screw



I Interior View





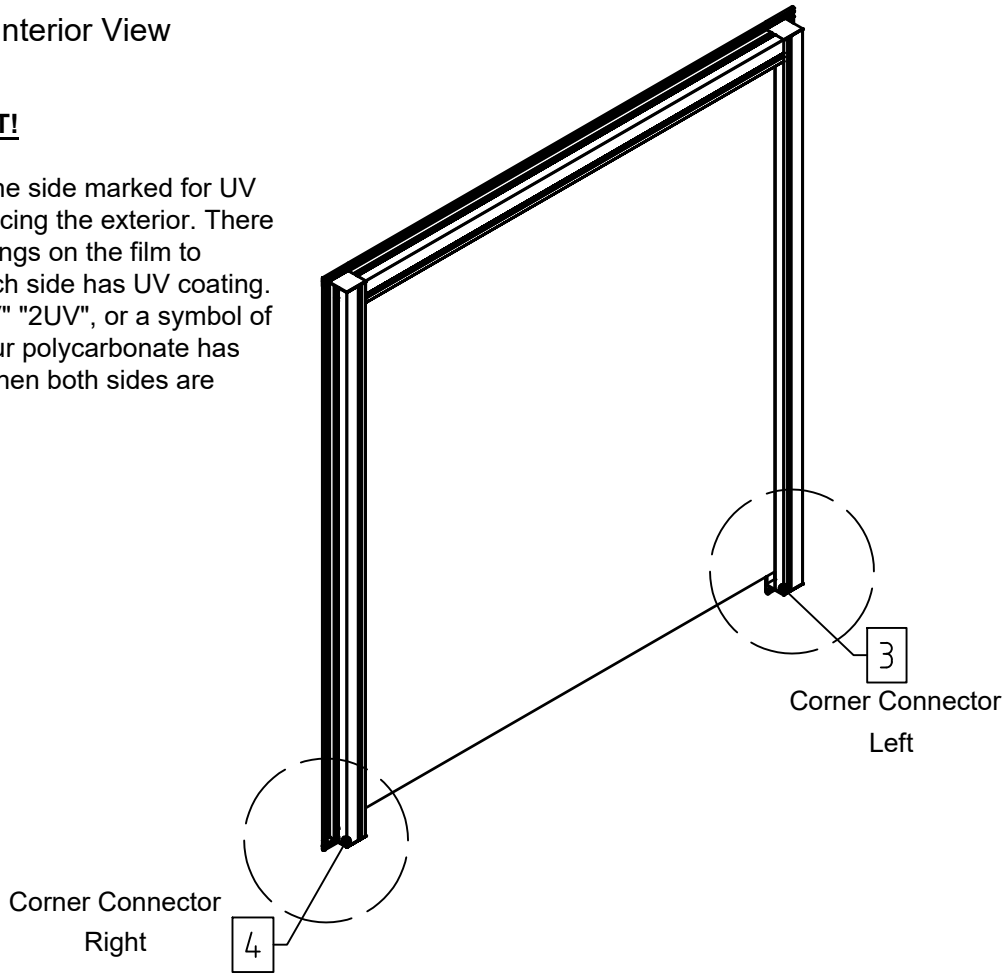


DF-C

1 Interior View

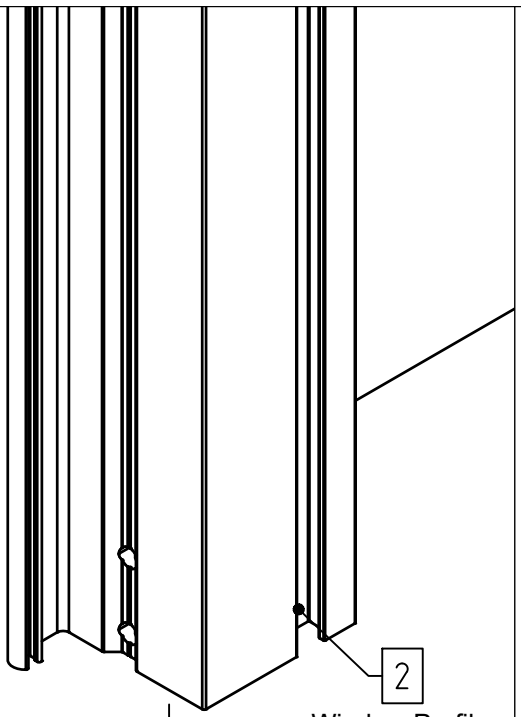
IMPORTANT!

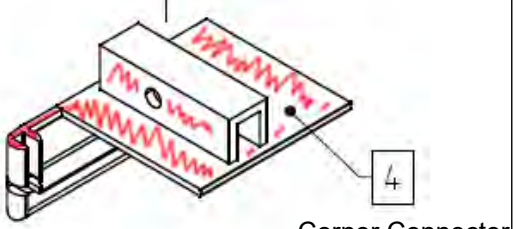
Make sure the side marked for UV Coating is facing the exterior. There will be markings on the film to indicate which side has UV coating. Look for "UV" "2UV", or a symbol of a sun. IF your polycarbonate has **BLUE** film, then both sides are UV-coated.

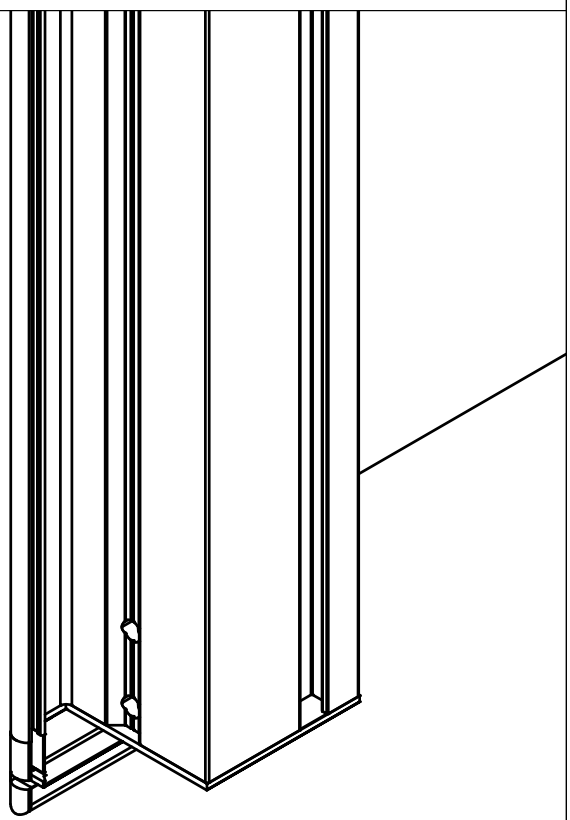


2x

Repeat
on both sides

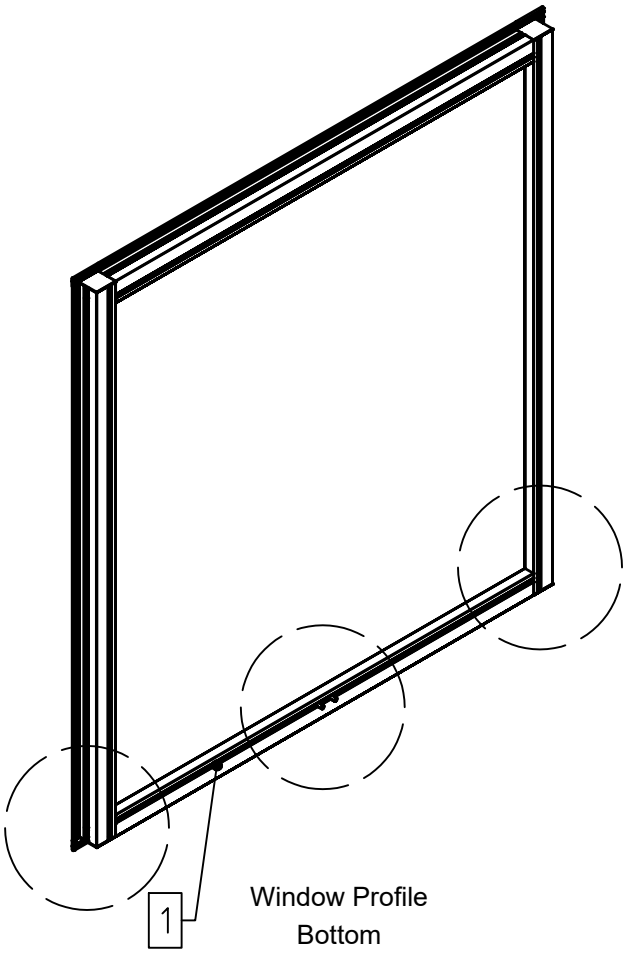




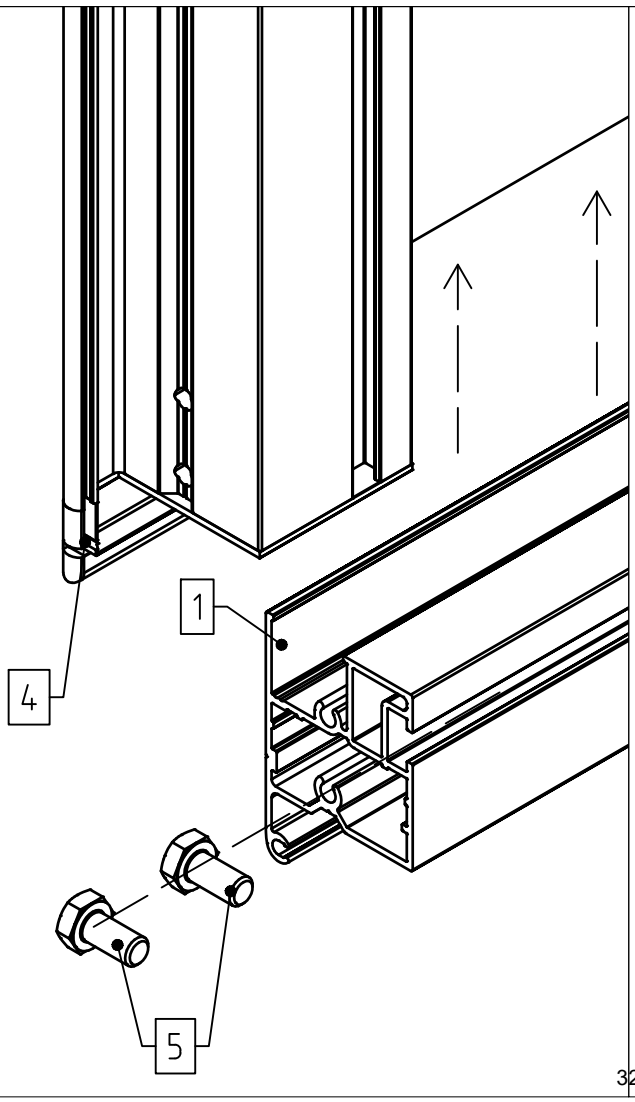


It is recommended to apply silicone on the black corner connectors where they meet the aluminum frame in the next steps. This will help reduce the possibility of drips/leaks. Silicone marked with red lines

I

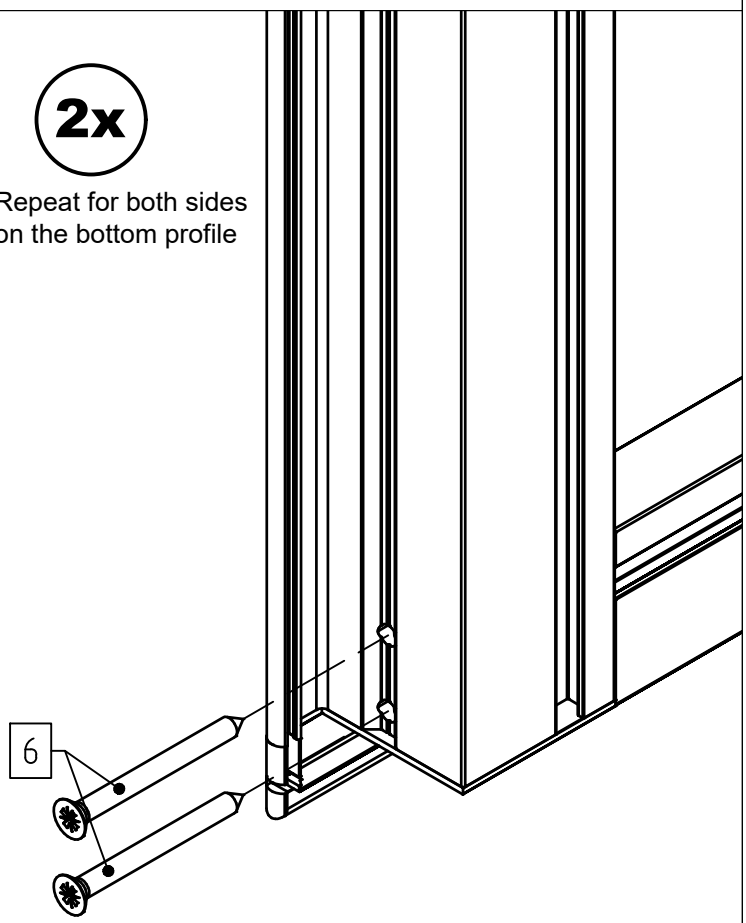


Window Profile
Bottom



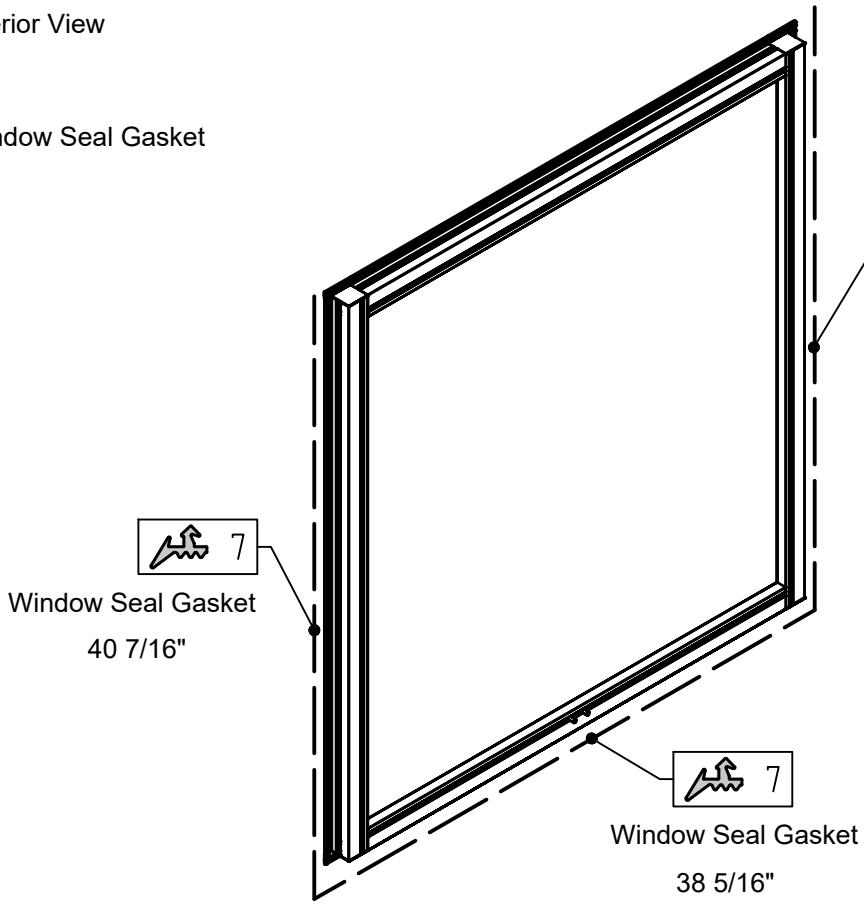
2x

Repeat for both sides
on the bottom profile



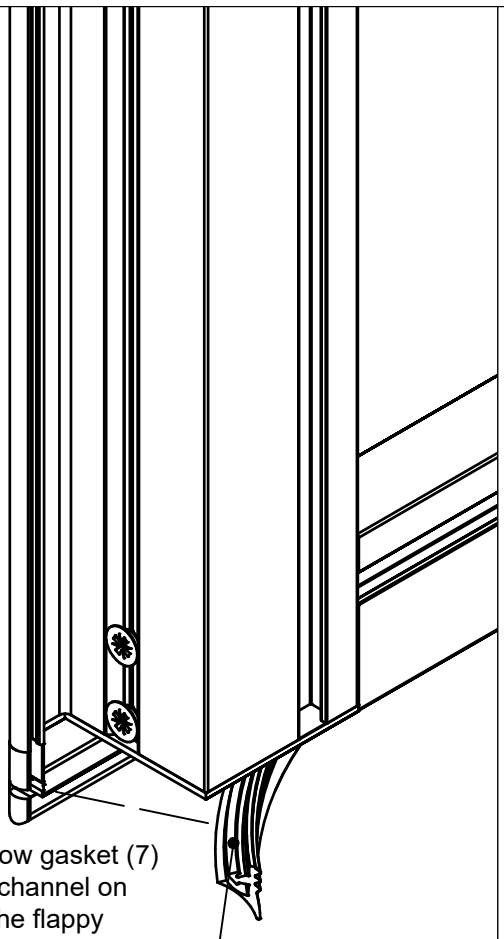
Interior View

Window Seal Gasket



3x

Repeat for the two side profiles and bottom window profile. The top window profile will NOT get gasket.



Arrow-shape on window gasket (7) is inserted into small channel on the edge of frame. The flappy side is toward the edge. Cut the ends at an angle to create a mitered corner like a picture frame.

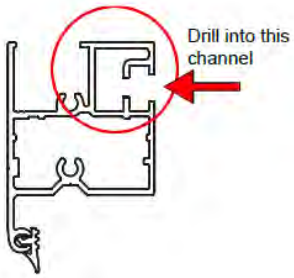
7 Window Seal Gasket

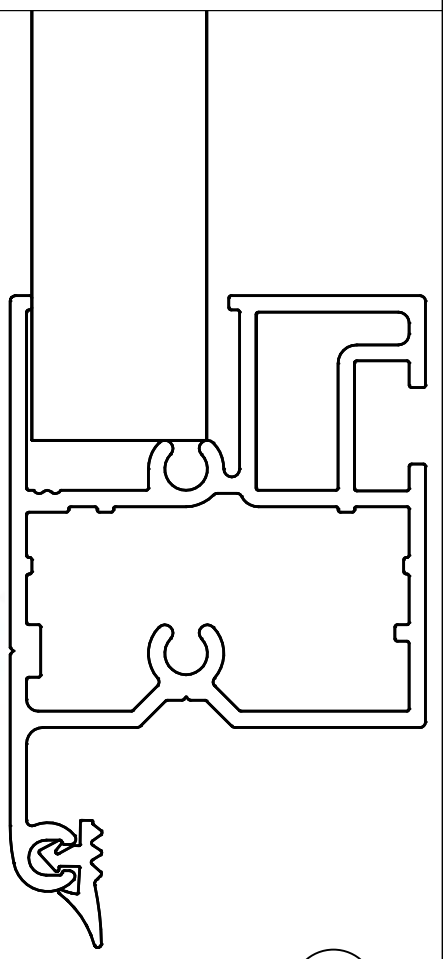
38 5/16"

Important!

If you are in a cold environment. We recommend adding a drainage hole to water does not trap inside the bottom profile.

Drill a small hole 3" away from the edge on each side of the bottom profile.



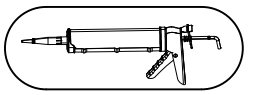


VD

Simplified View

A Exterior View

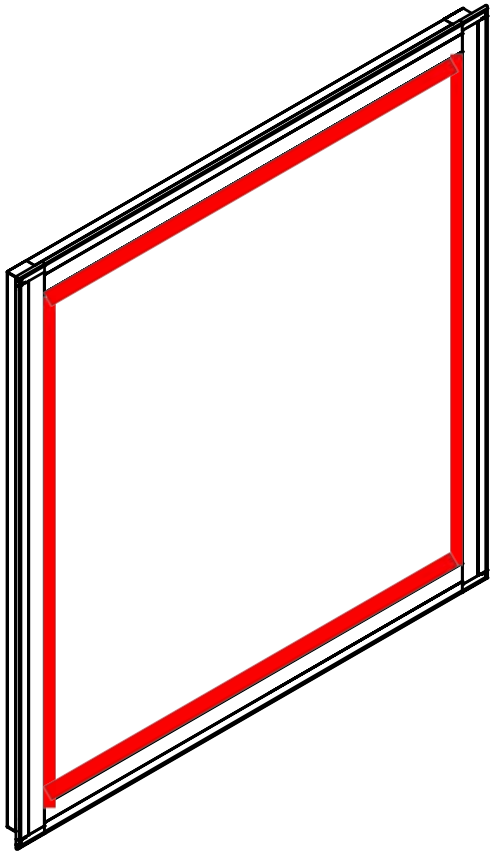
Reverse View!
Flip Roof Window over

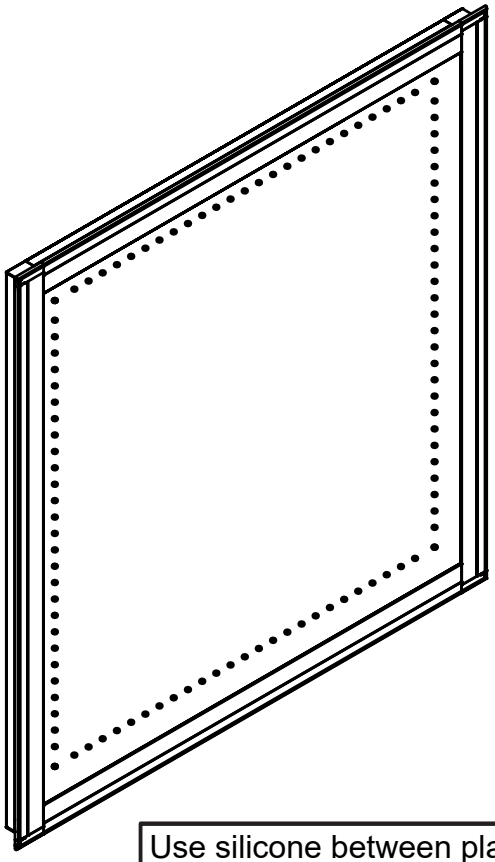


Silicone

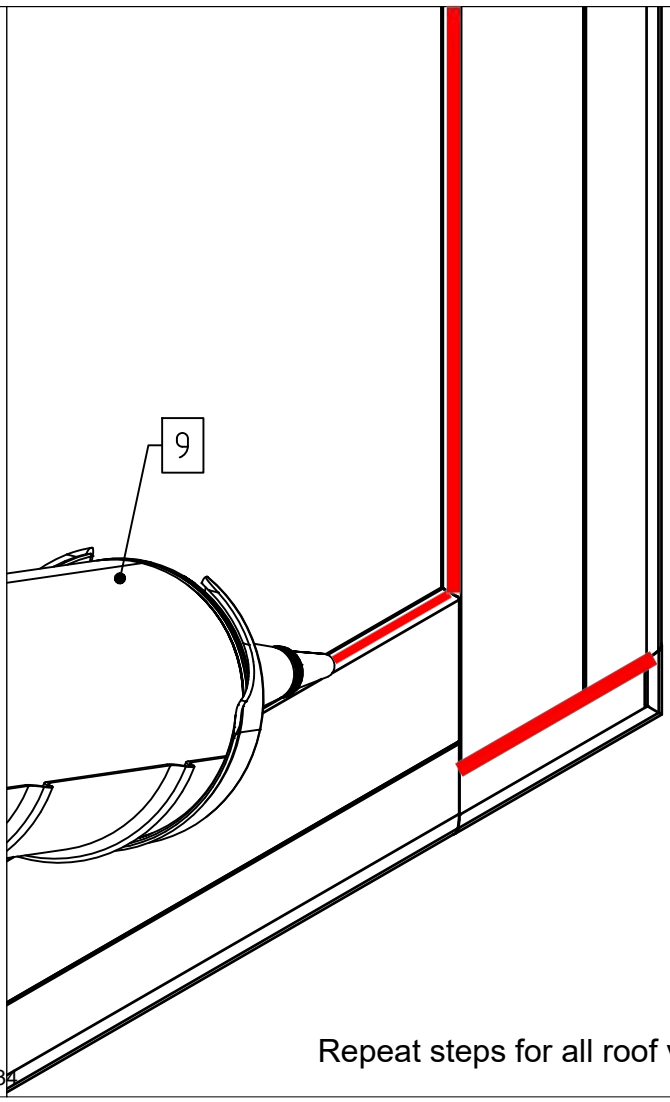
Apply silicone where the polycarbonate meets the metal profile and along the edge to prevent leaking.

Silicone along where the red lines are.





Use silicone between plastic connectors and aluminum profiles!

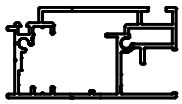
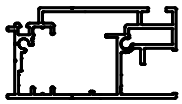
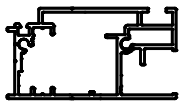
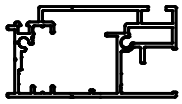
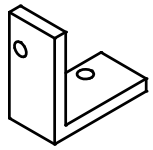
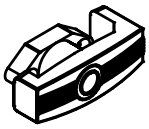
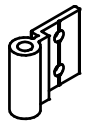
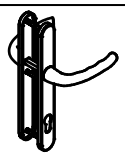
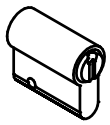
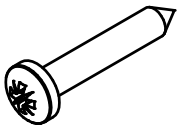


Repeat steps for all roof vents

Note: You will have 2 lower doors, one fro the front gable and one for the rear gable.

Upper Door Assembly

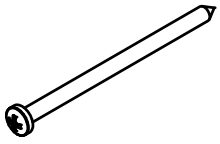
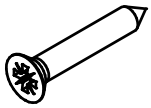
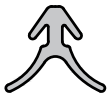
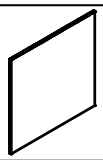
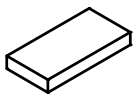
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P059–29–01–00–00–1	Top Door Frame	1	955 mm 37 5/8"
2		P059–30–01–00–00–1	Bottom Door Frame (with drainage hole)	1	955 mm 37 5/8"
3		P059–31–01–00–00–1	Vertical Door Frame (handle side w/ lock holes)	1	930 mm 34 15/16
4		P059–32–01–00–00–1	Vertical Door Frame (hinge side w/ hinge holes)	1	930 mm 34 15/16
5		9999000065	Corner connection angle	4	
6		9999000023	Sash Lock	1	
7		9999000716	Hinge	4	30 mm 1 3/16"
8		9999000523	Lockcase	1	30 mm 1 3/16"
9		9999000556	Door Handle Assembly (w/ rod and 3 screws)	1	
10		9999000522	Lock cylinder with screw	1	
11		9999000637	Metal disk for magenetic door catch	1	
12		9999000596	Panhead Screw 4.2 x 25mm (to connect corners of doors)	4	DIN 7981

Upper Door Assembly

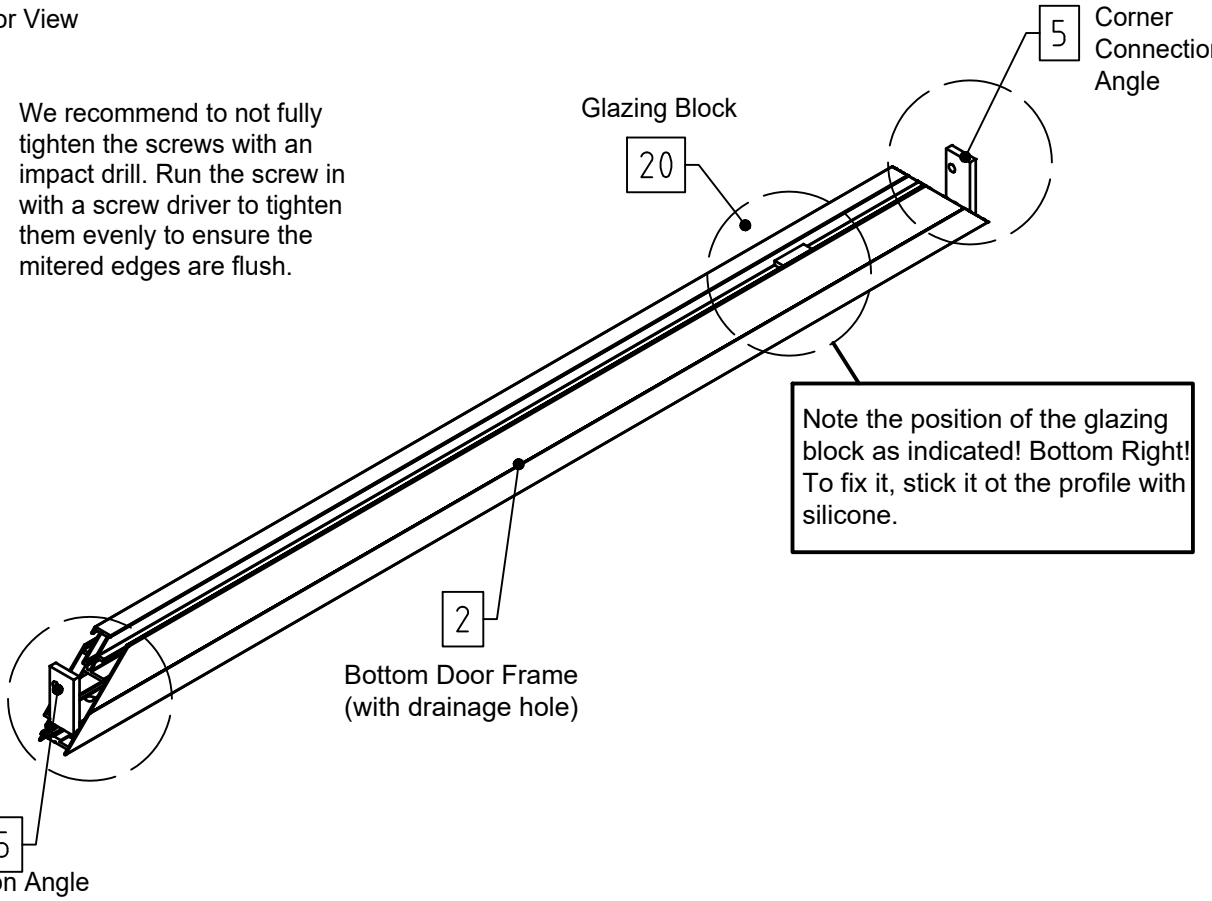
Packlist and Parts

Note: You will have 2 lower doors, one fro the front gable and one for the rear gable.

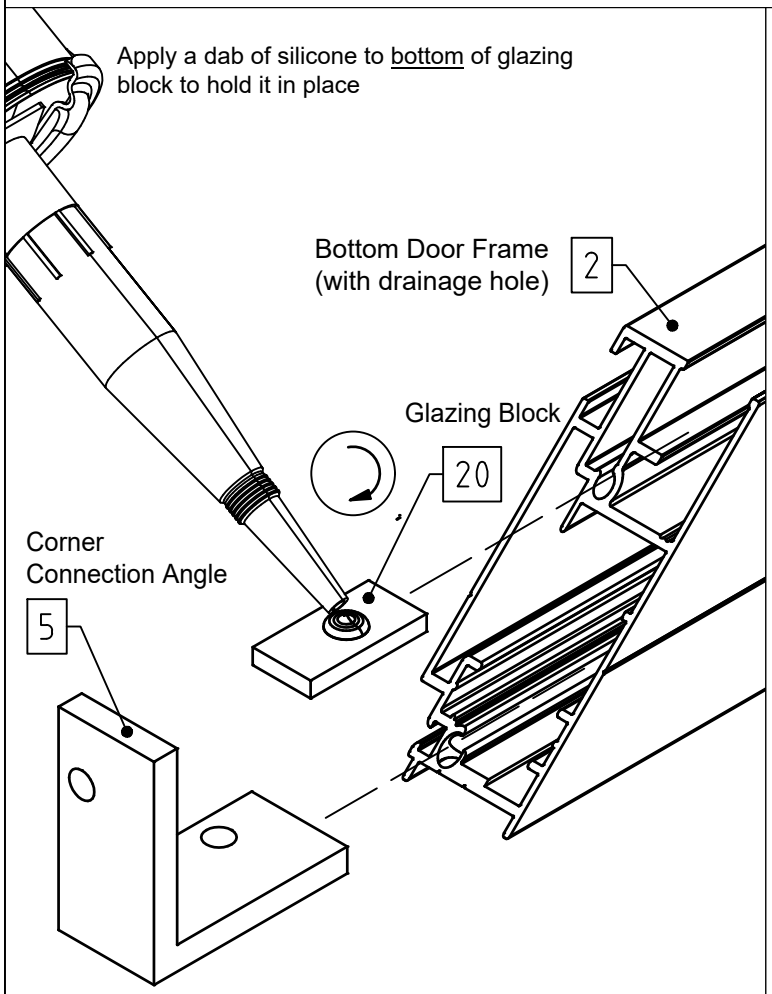
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000662	Panhead Screw 4.2 x 70mm (to connect corners of doors)	4	DIN 7981
14		9999000152	Countersunk Screw 3.5 x 22mm (screws for sash lock)	2	DIN 7982
15		9999000204	Countersunk Screw 4.2 x 13mm (to install lockcase)	2	DIN 7982
16		9999002532	Panhead Screw (self-tapping) 3.9x13mm (for magnetic catch)	1	DIN 7504
17		9999000144	Panhead Screw 4.2 x 13mm (screws for hinges)	8	DIN 7981
18		9999000032	Y Gasket	4,0 lfdm. 14' 8"	
19			Polycarbonate Panel 847 x 821 mm 33 3/8" x 32 5/16"	1	
20		9999001240	Glazing Block	2	
21					
22					
23					
24					

A Exterior View

We recommend to not fully tighten the screws with an impact drill. Run the screw in with a screw driver to tighten them evenly to ensure the mitered edges are flush.

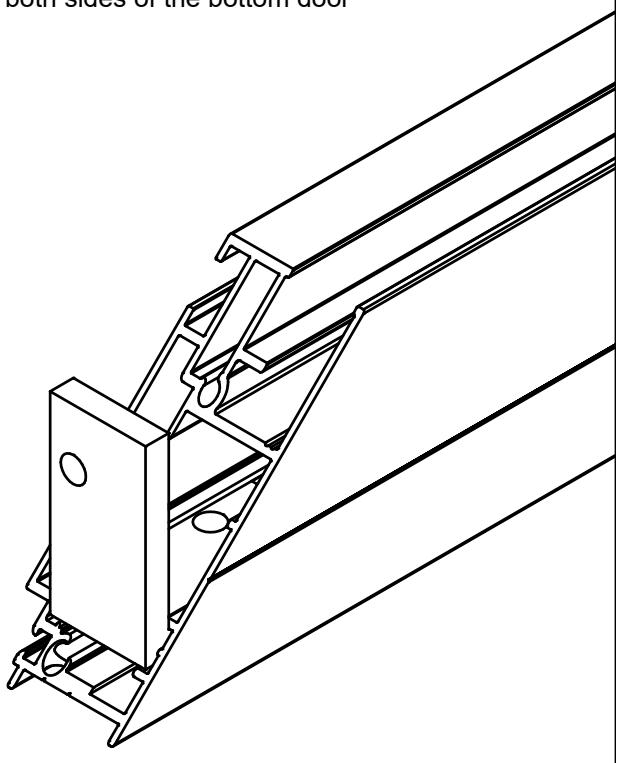


Repeat for each side of the Bottom profile

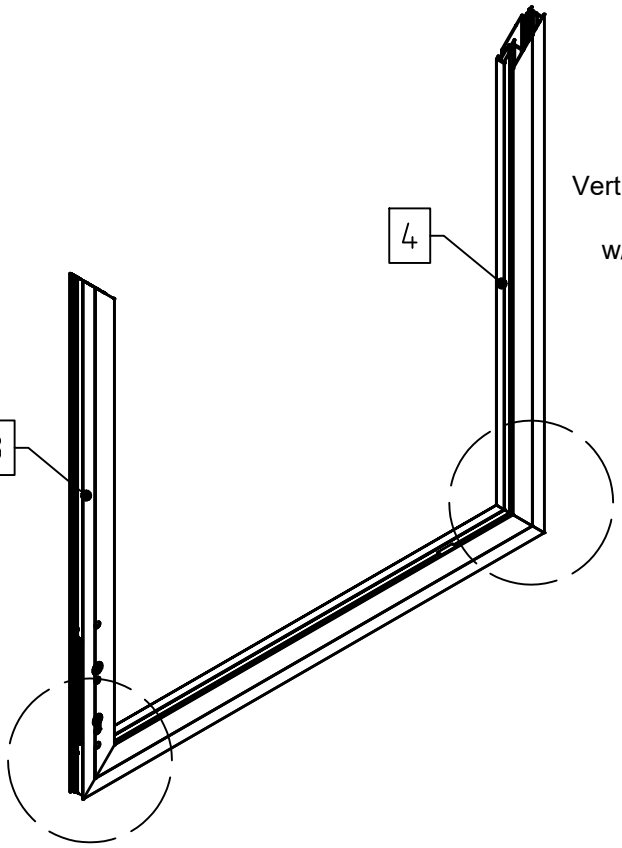


2x

Repeat on both sides of the bottom door frame

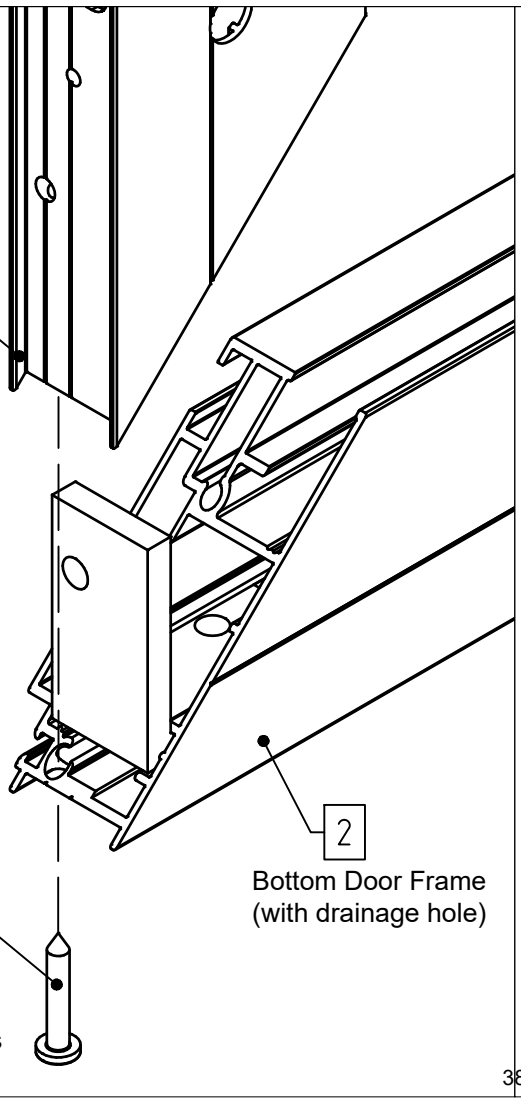


A Exterior View



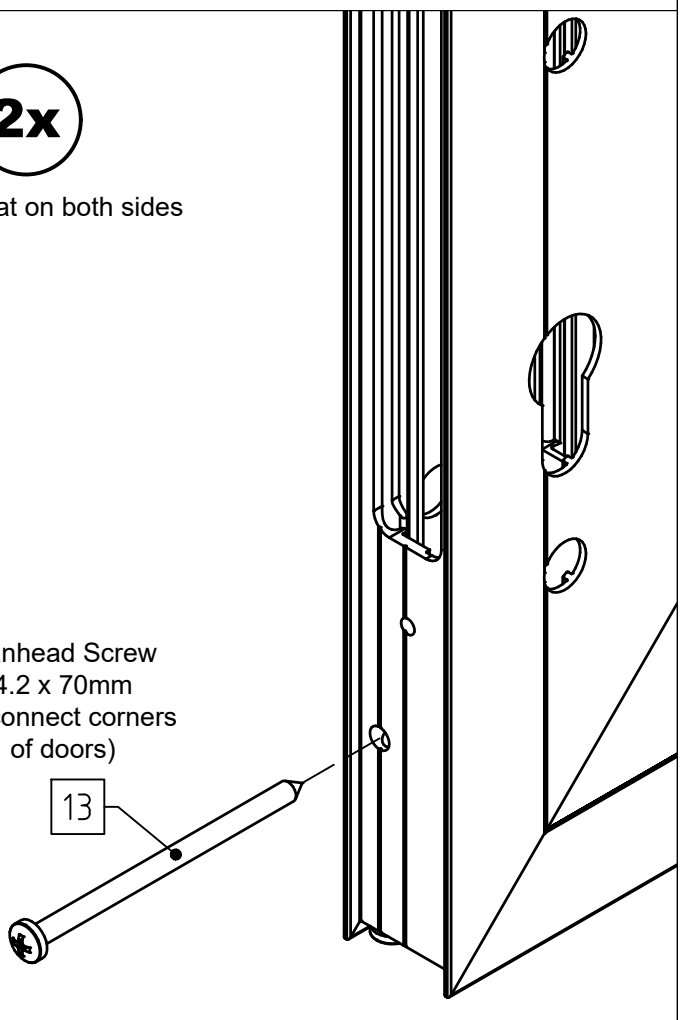
2x

Repeat on both sides

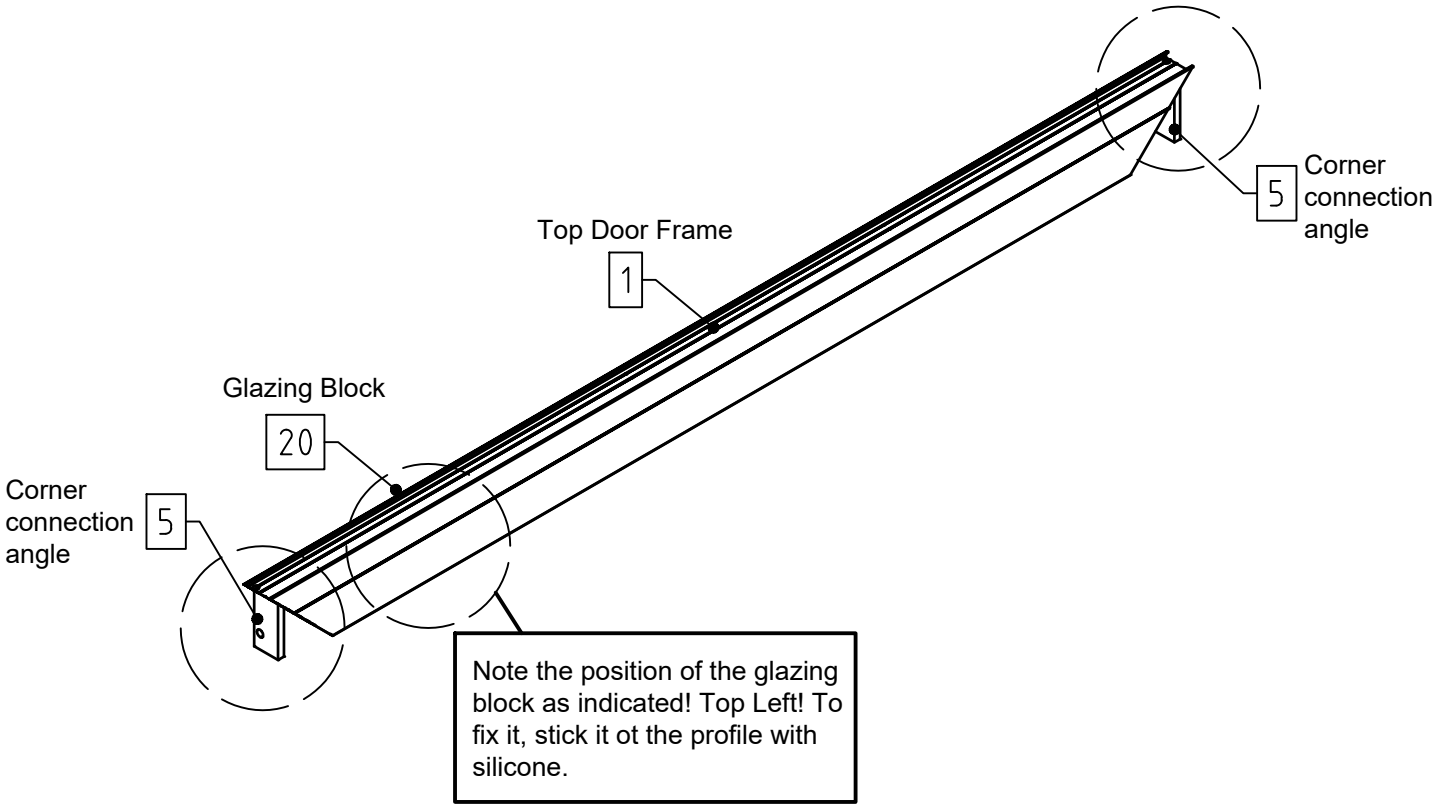


2x

Repeat on both sides

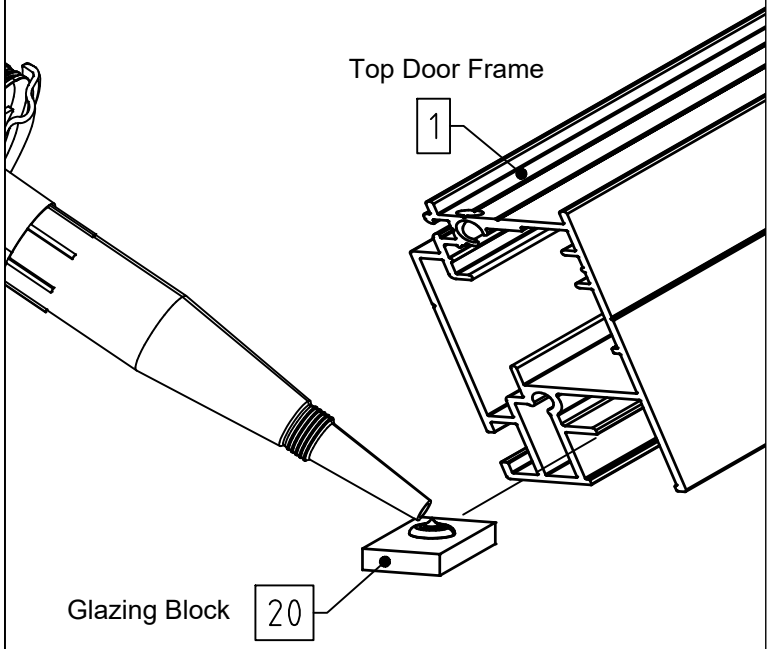


A Exterior View

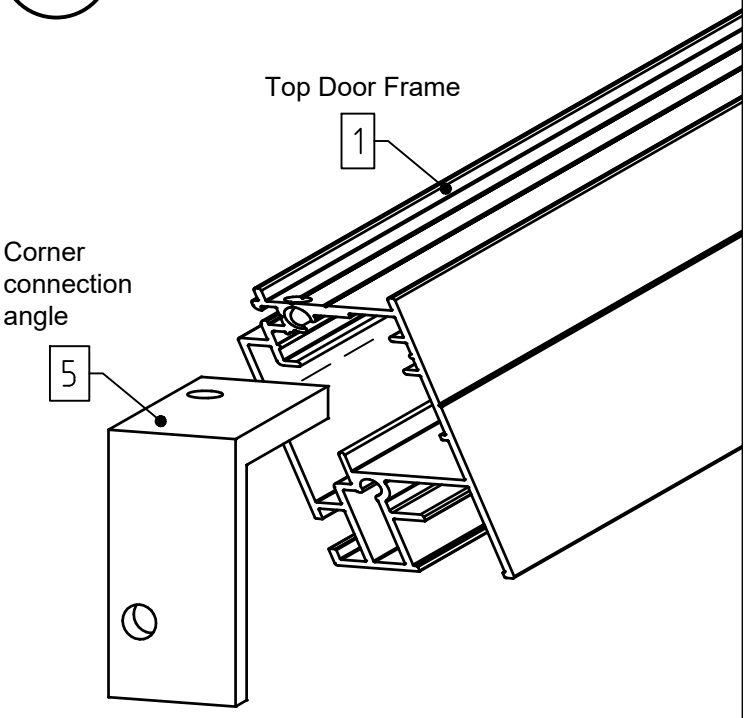


Repeat for each side of the Bottom profile

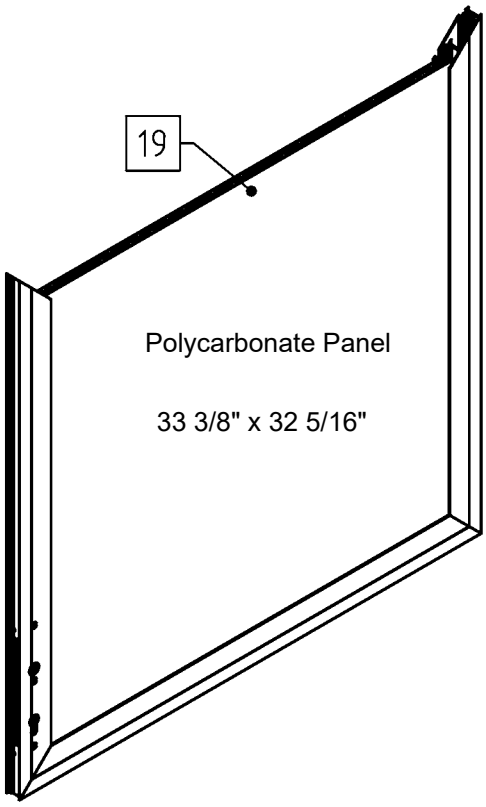
Apply a dab of silicone to <u>top</u> of glazing block to hold it in place

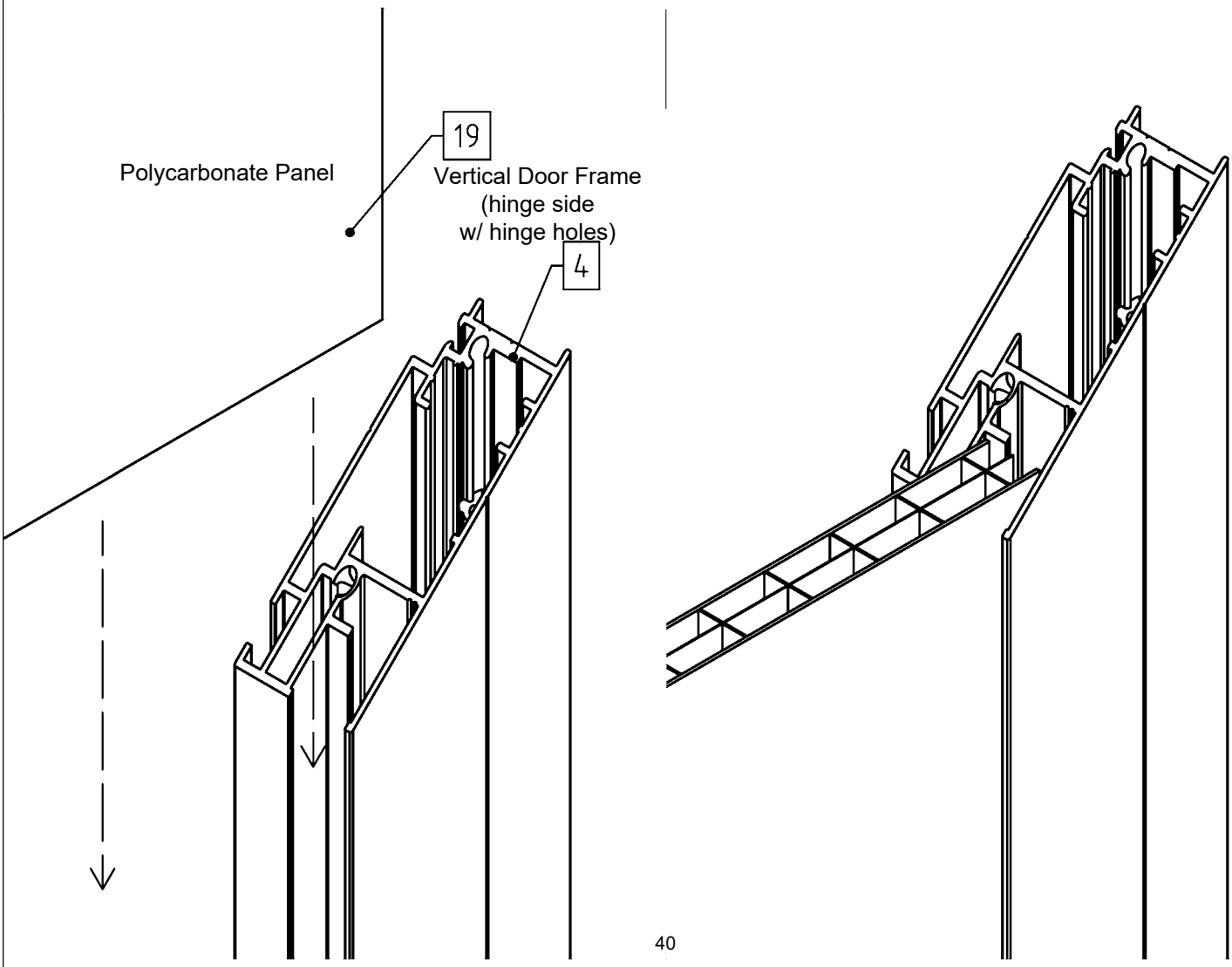


2x Repeat on both sides of the top profile



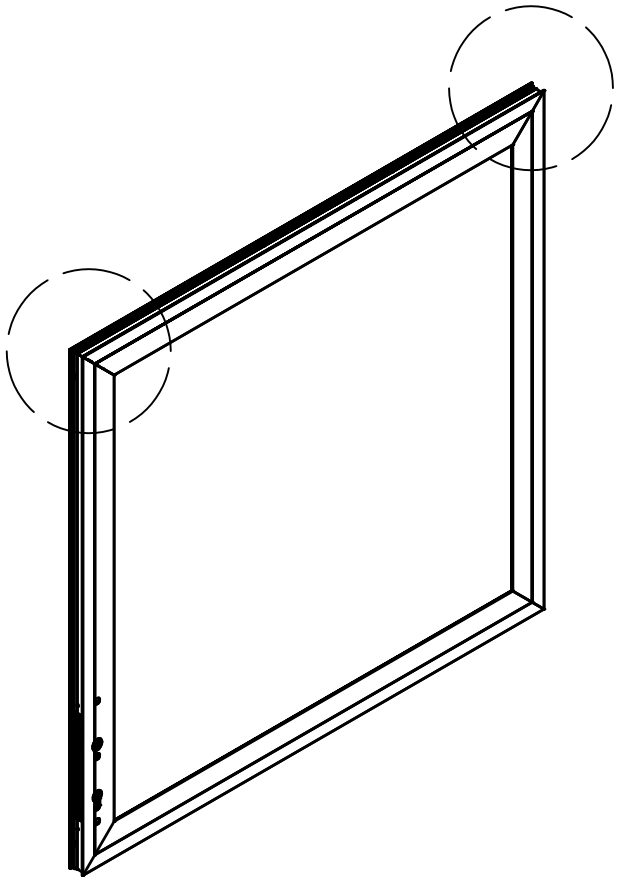
A Exterior ViewView



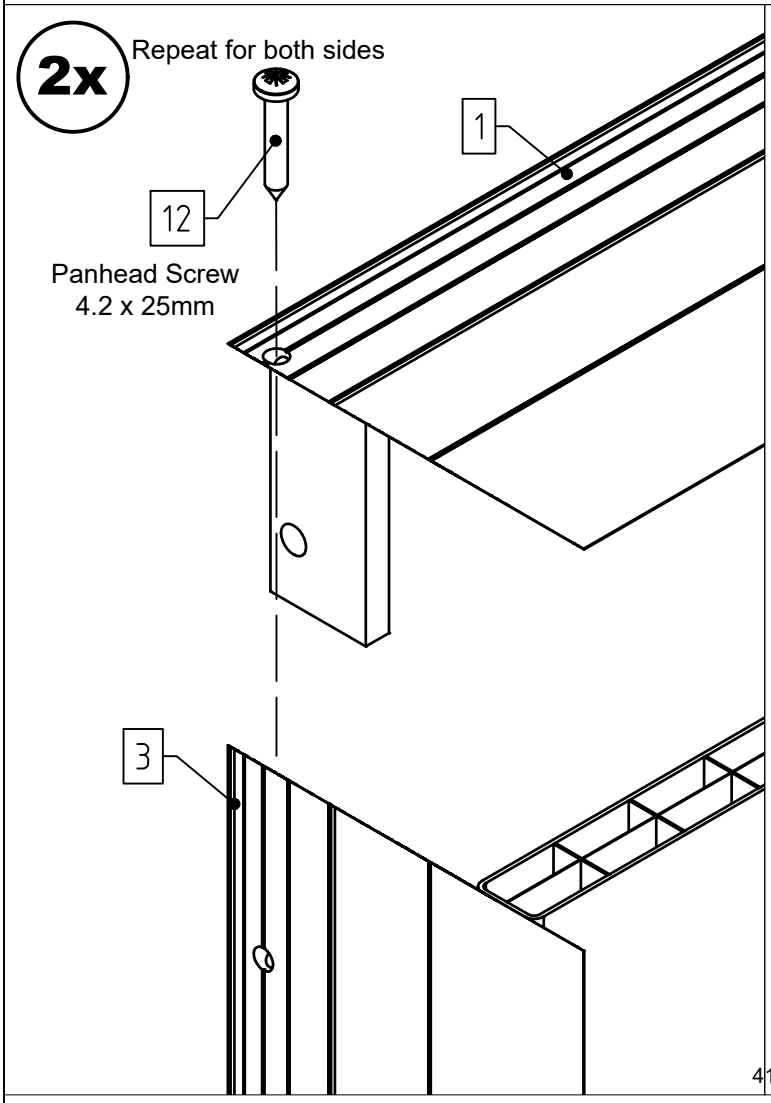


TO-D

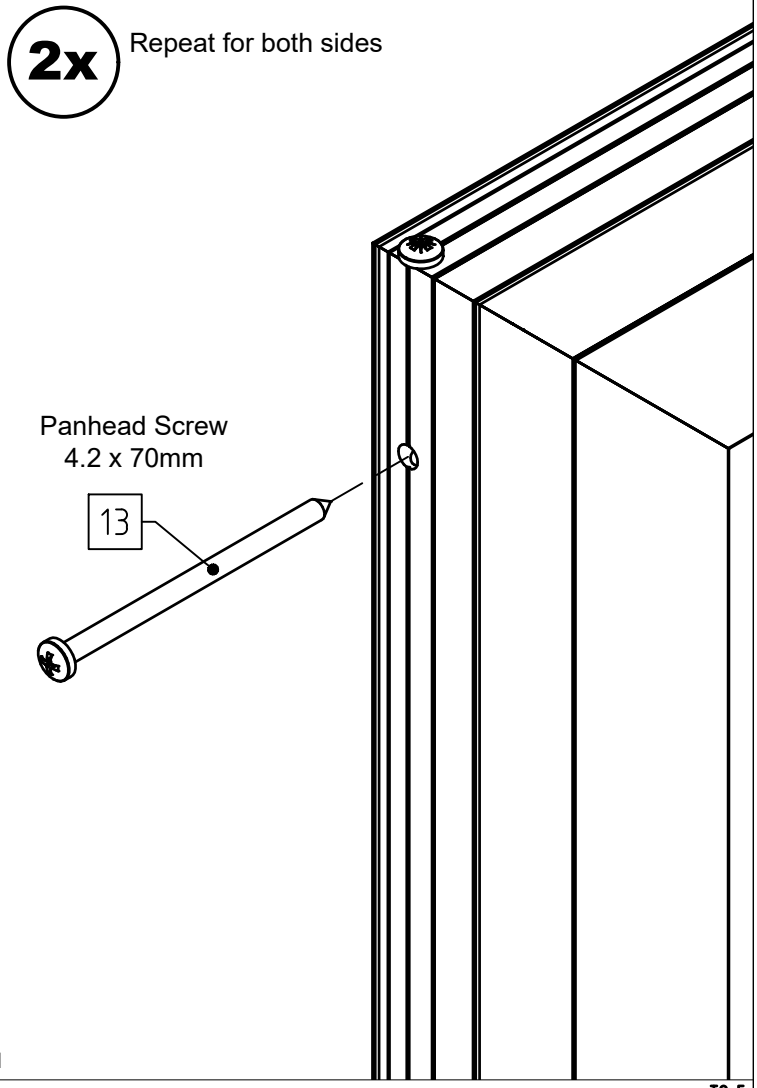
A Exterior View



2x Repeat for both sides



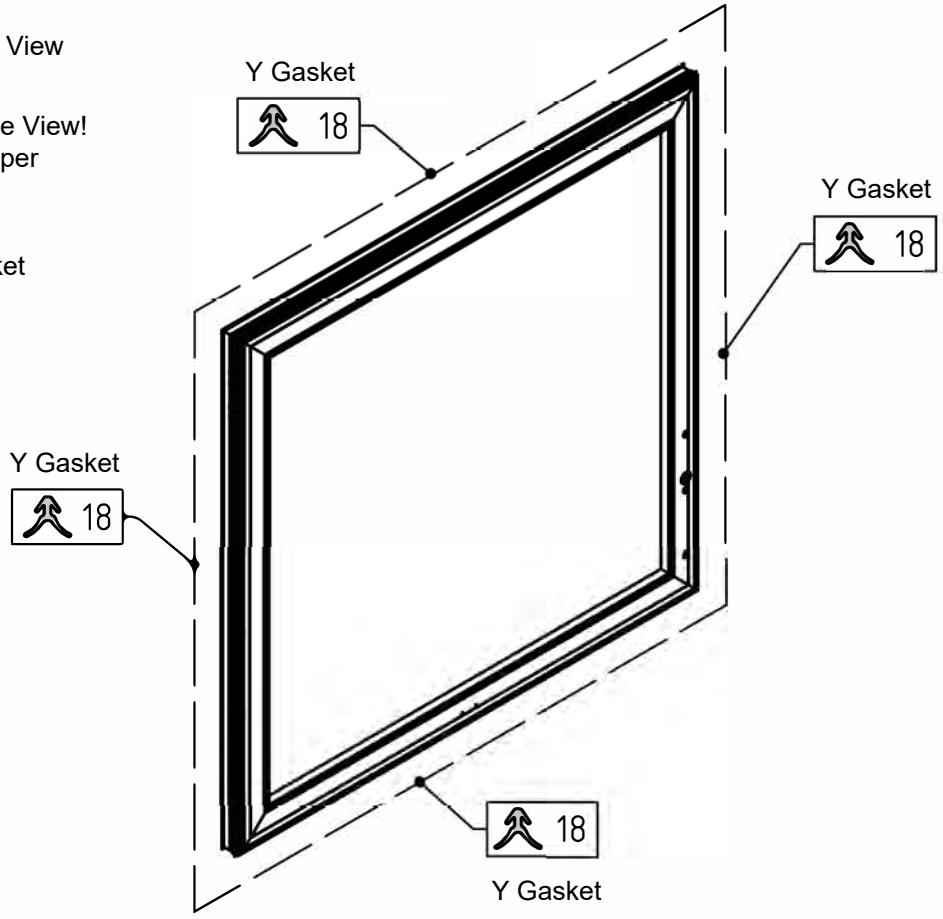
2x Repeat for both sides

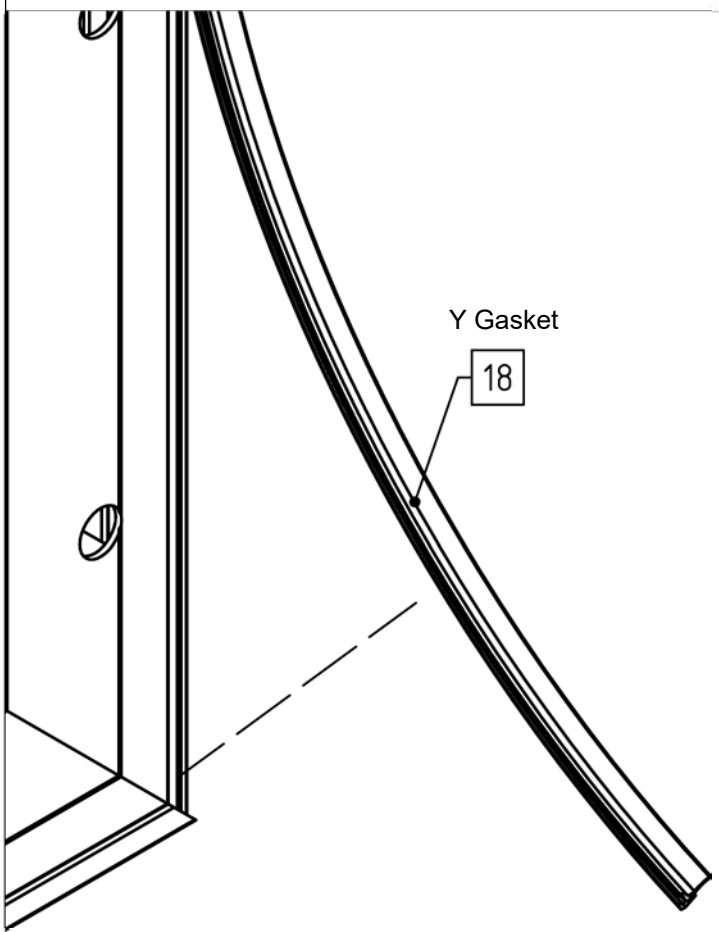


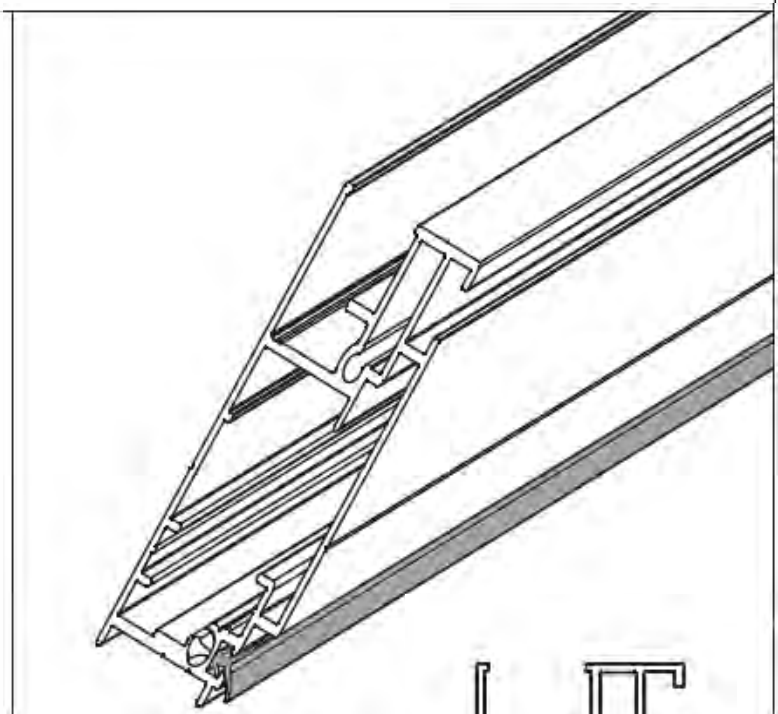
Interior View

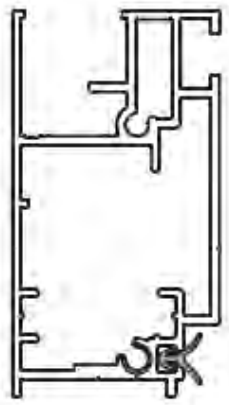
Reverse View!
Flip Upper
Door

Y Gasket







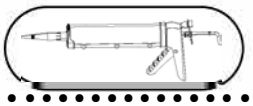


VD

Simplified View

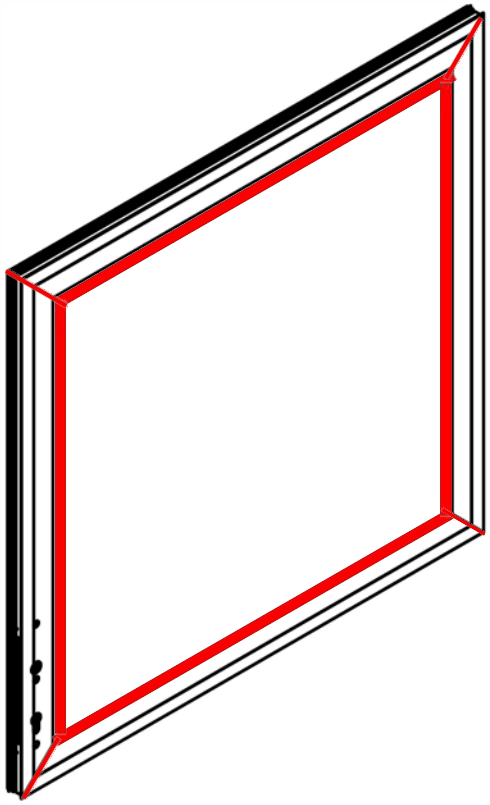
Exterior View

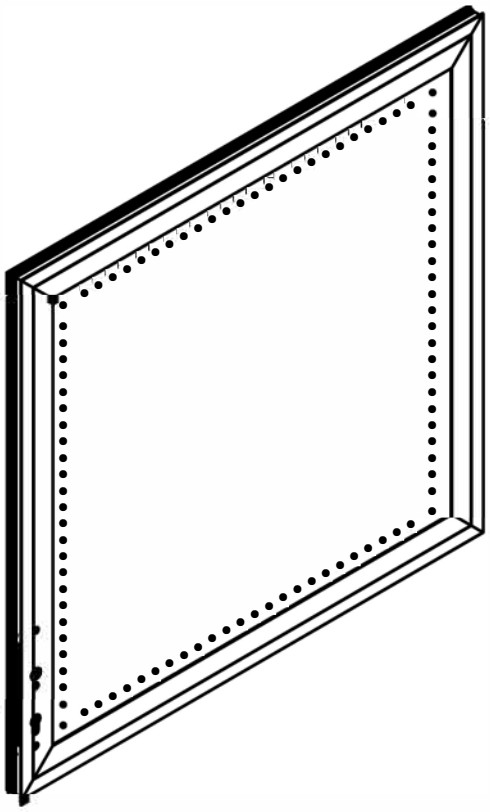
Reverse View!
Flip Upper
Door

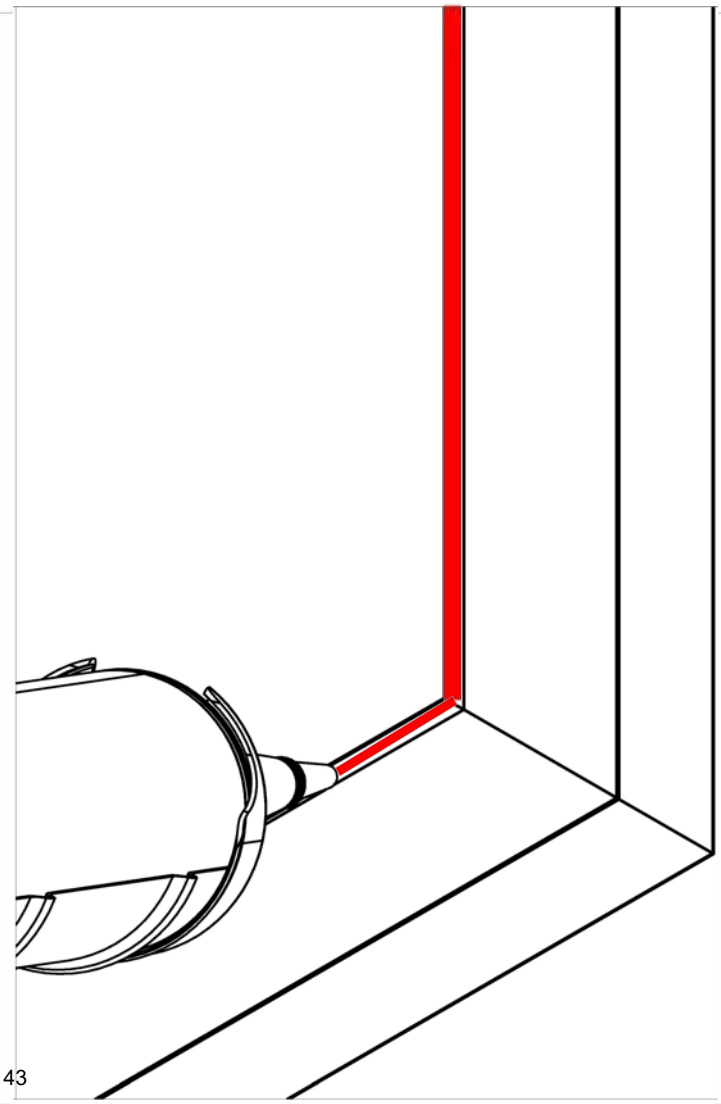


Silicone

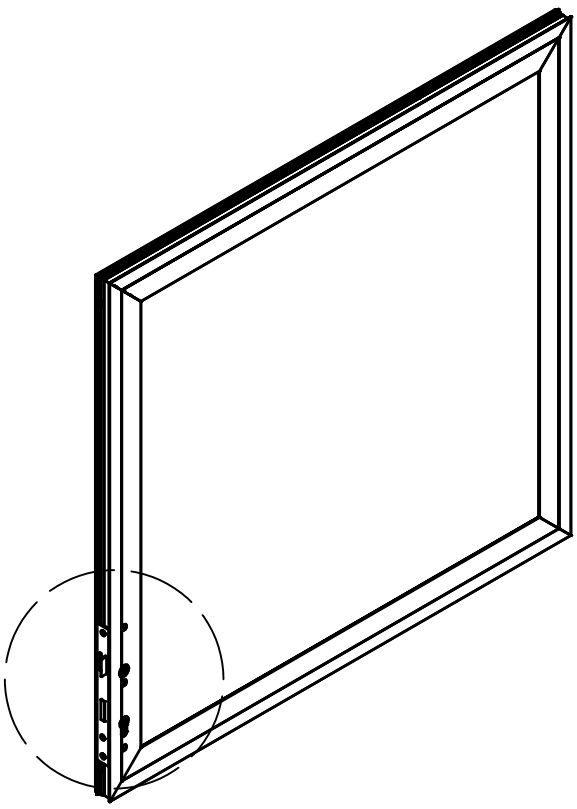
Apply silicone to the exterior where the polycarbonate meets the metal profile and along the edge to prevent leaking.
Silicone along where the red lines are.

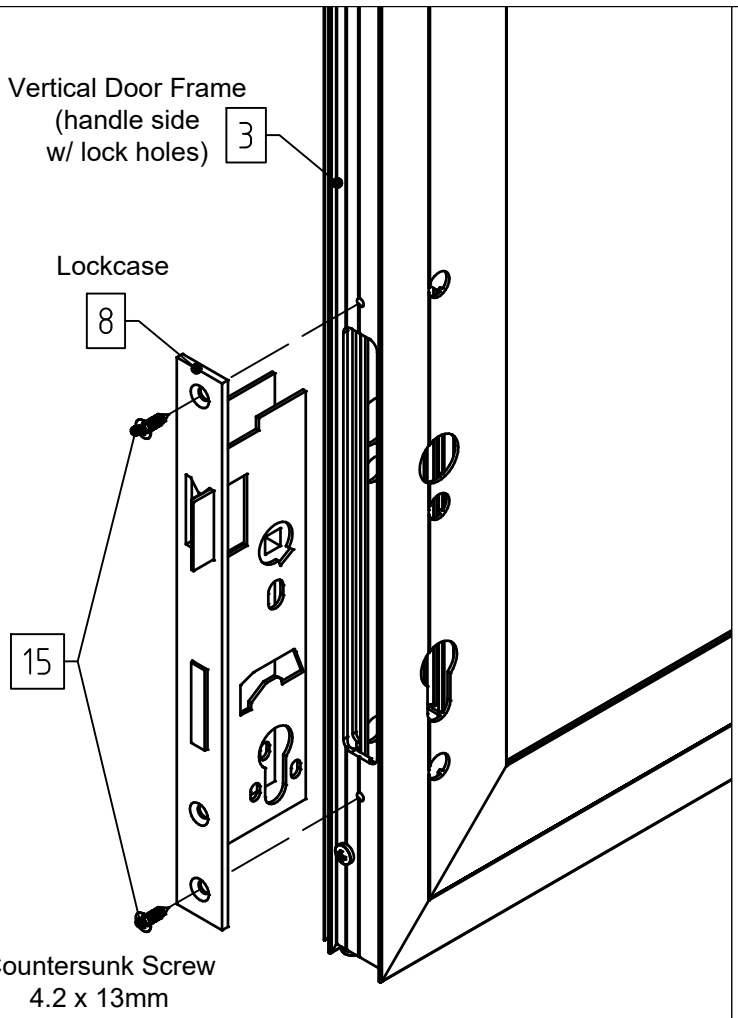


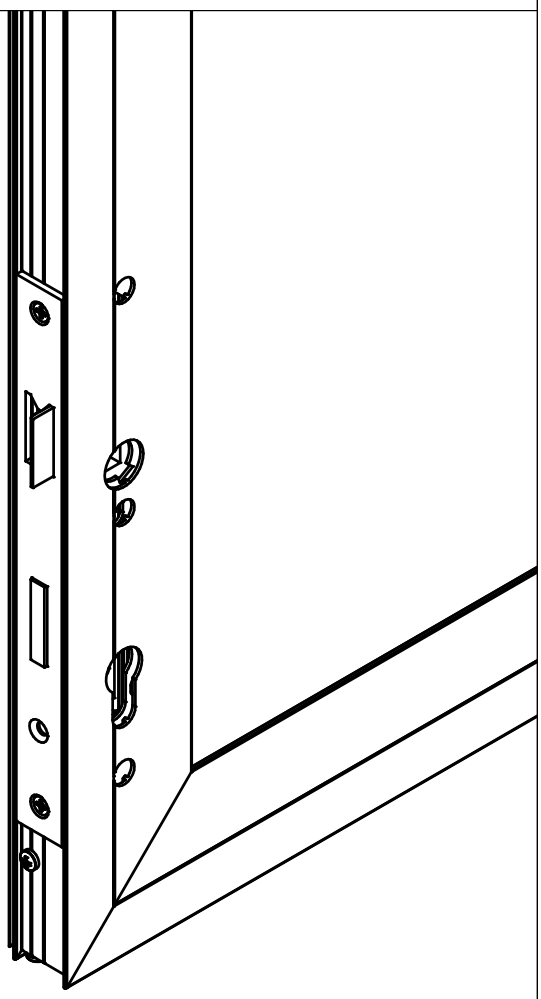




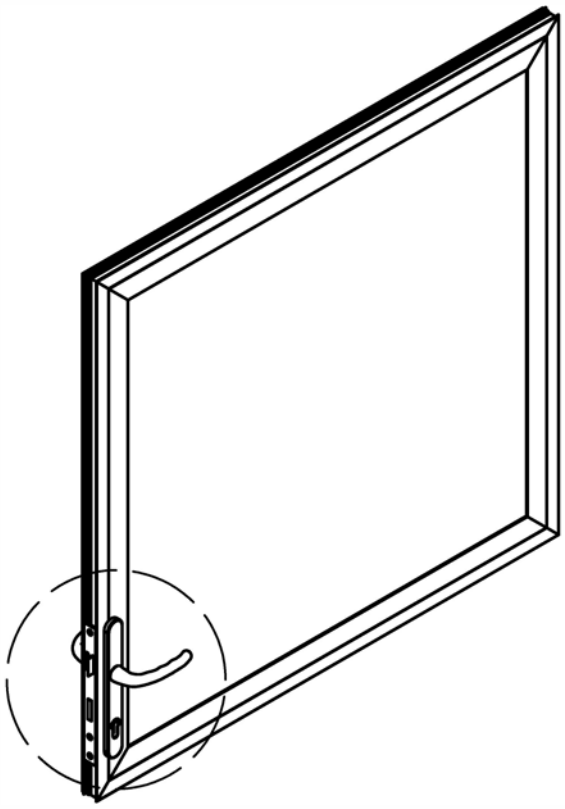
A Exterior View



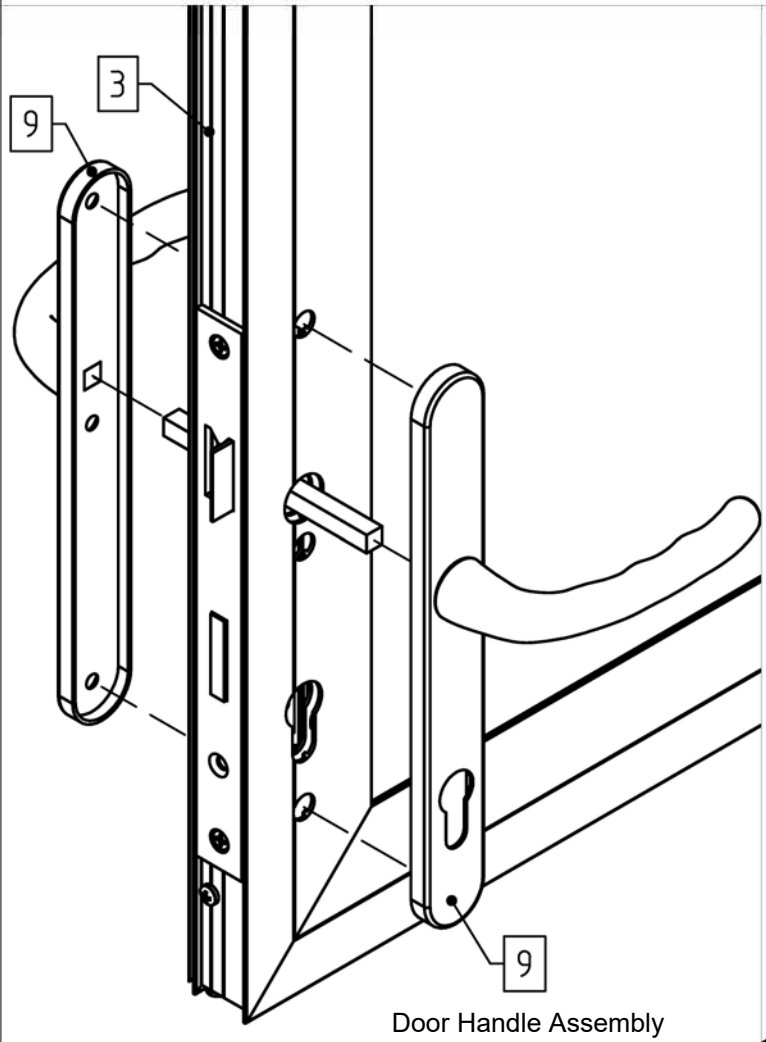




A Exterior View



Vertical Door Frame

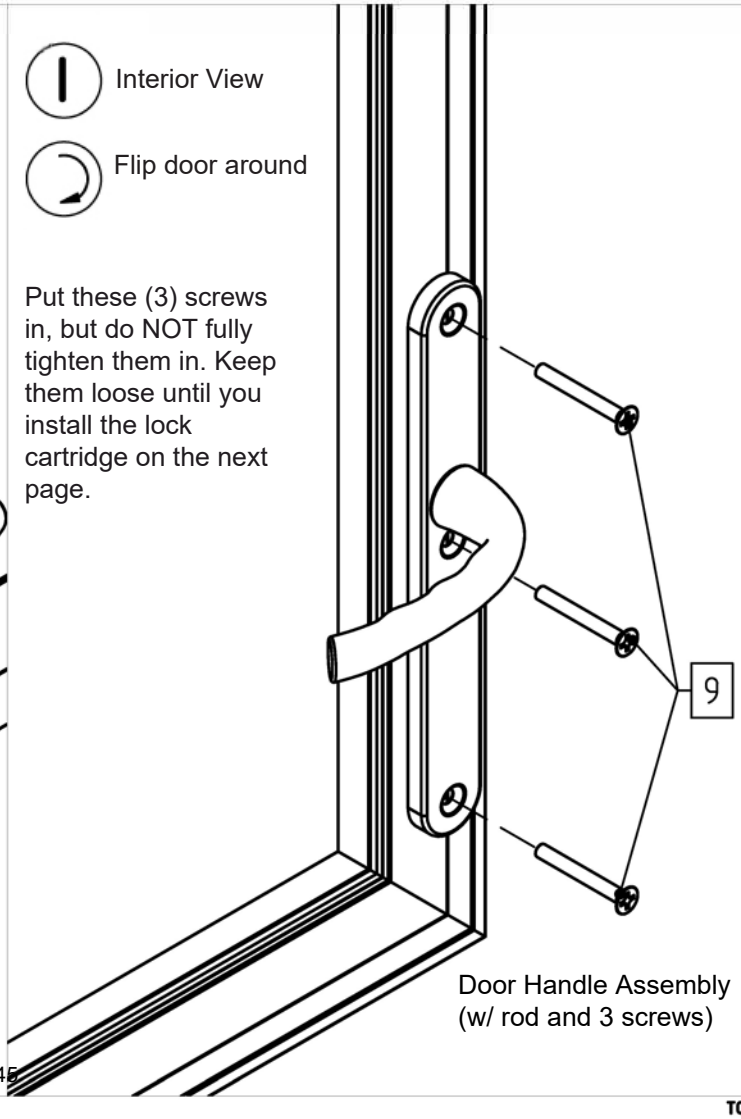


Door Handle Assembly
(w/ rod and 3 screws)

Interior View

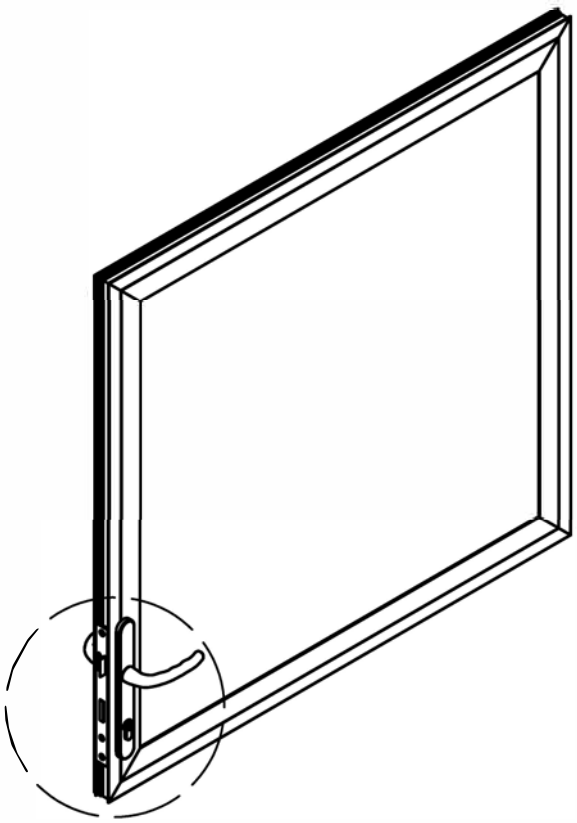
Flip door around

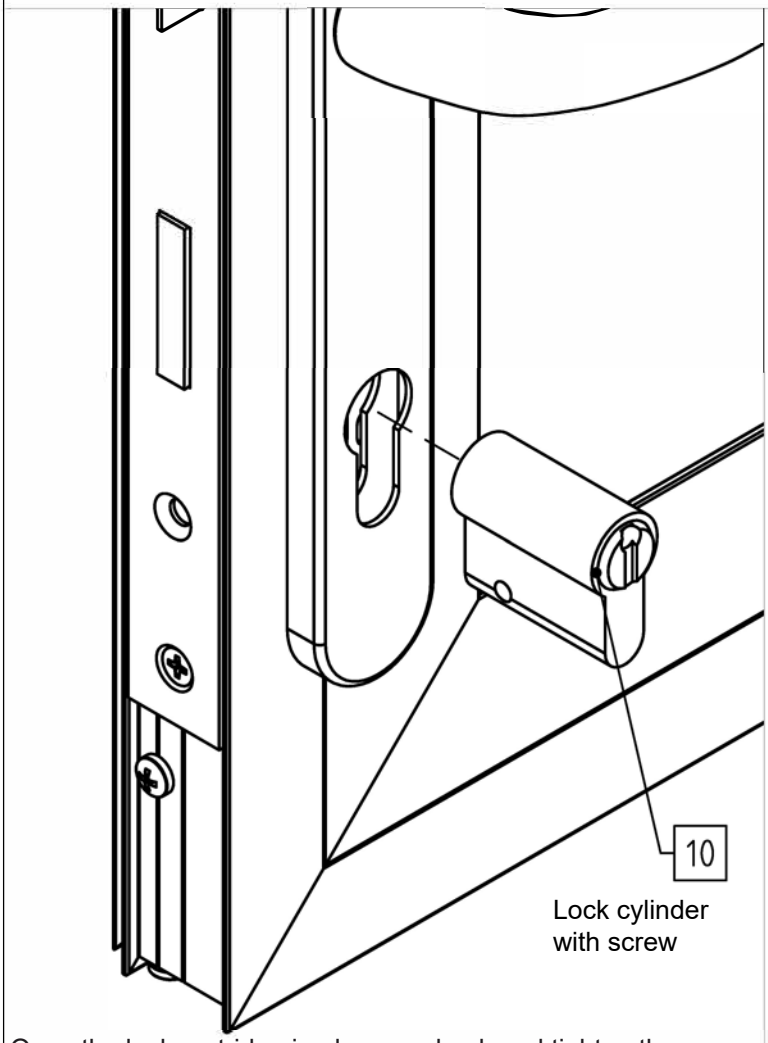
Put these (3) screws in, but do NOT fully tighten them in. Keep them loose until you install the lock cartridge on the next page.

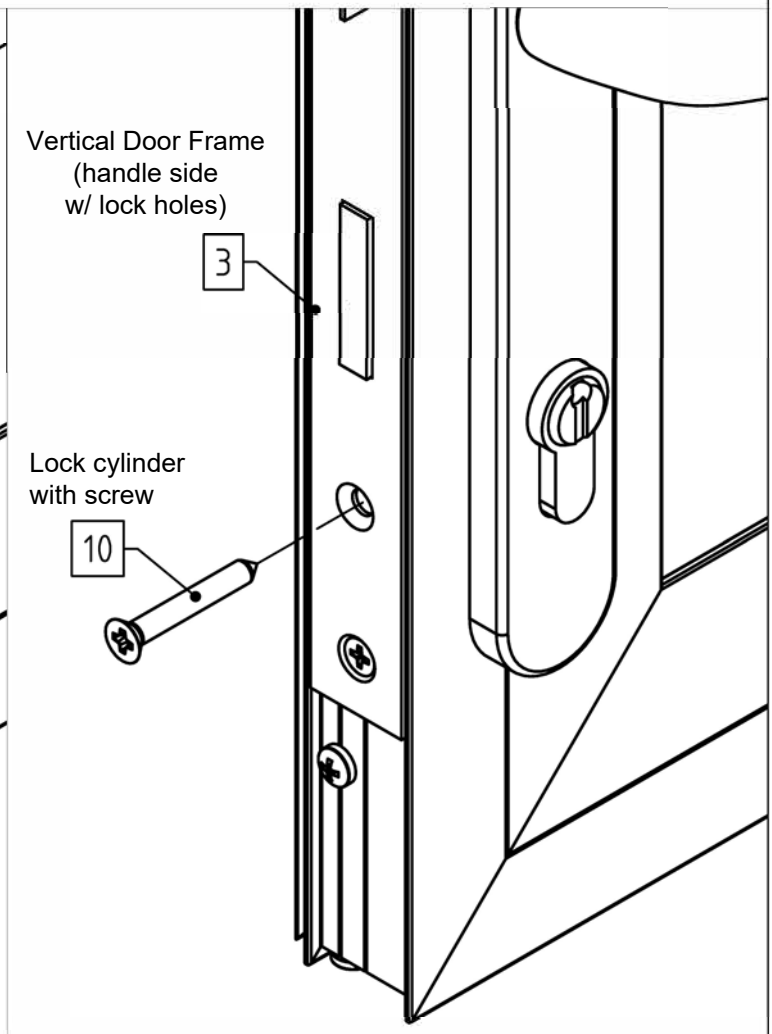


Door Handle Assembly
(w/ rod and 3 screws)

A Exterior View



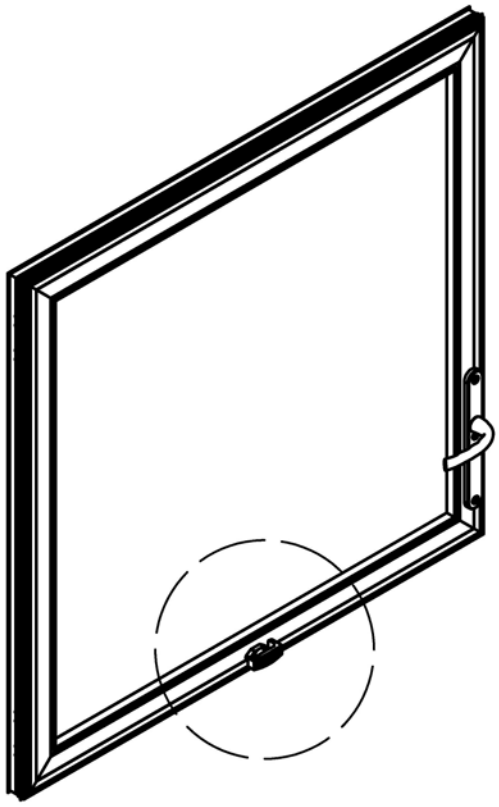


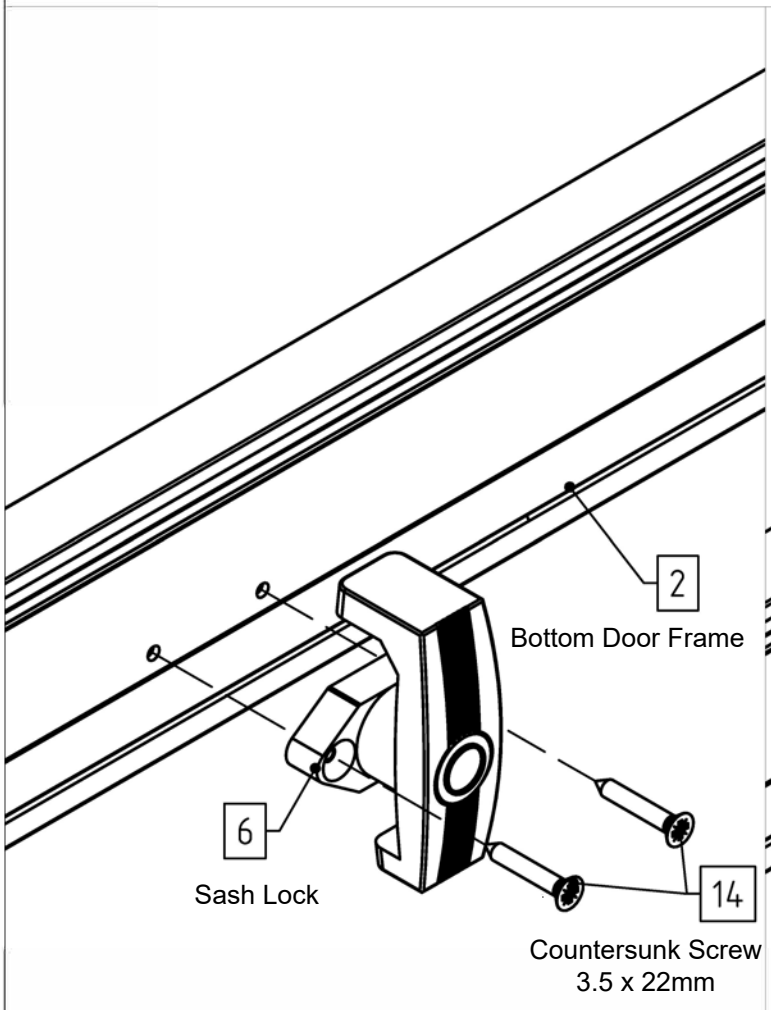


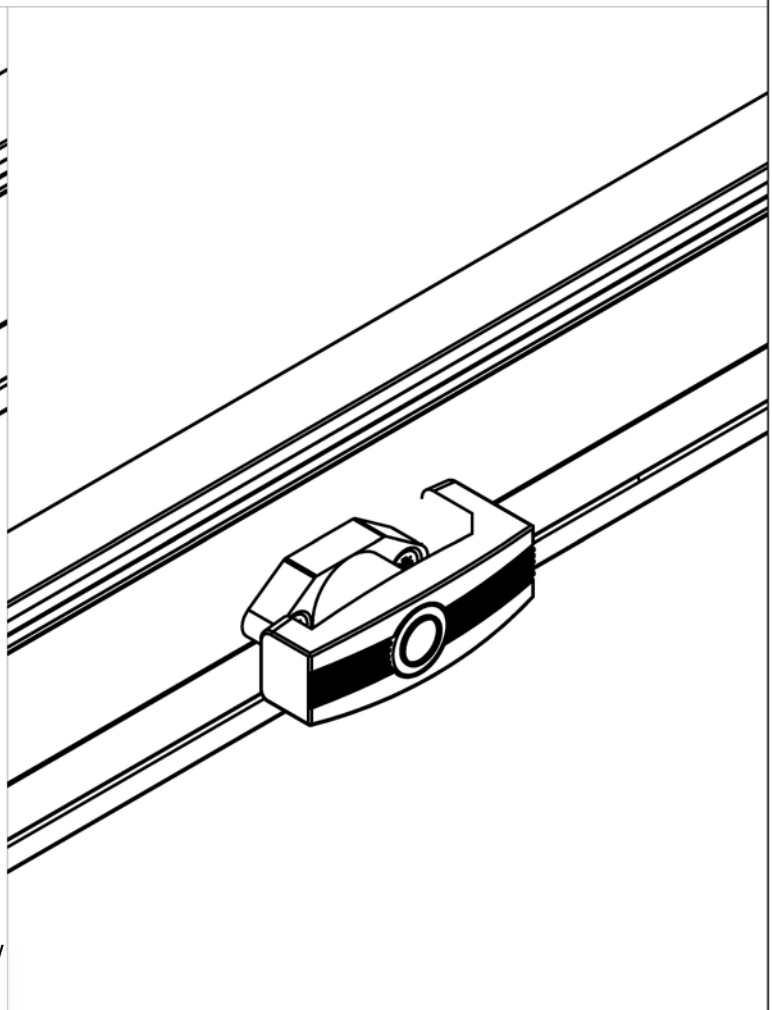
Once the lock cartridge in place, go back and tighten the (3) screws on the previous page.

Interior View

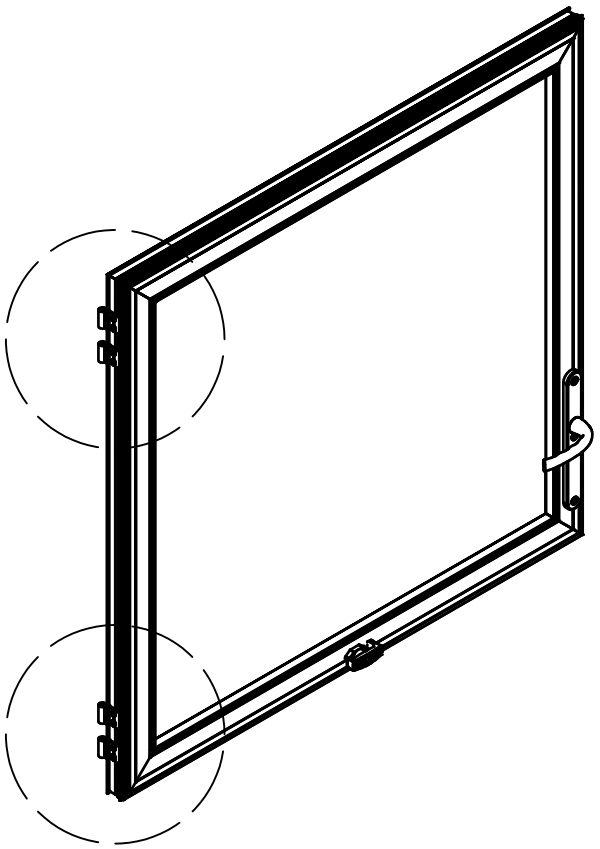
Flip Door Over

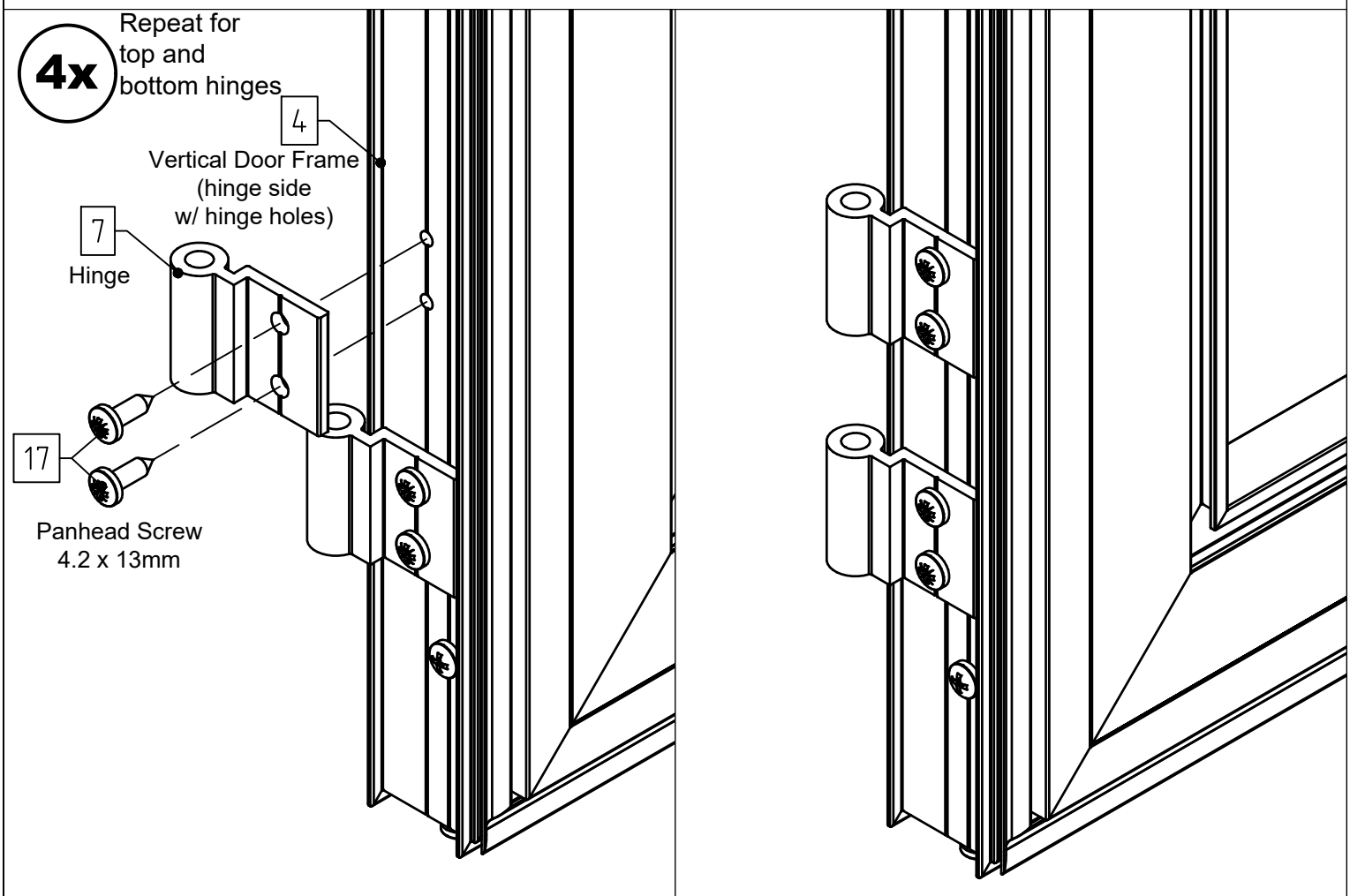






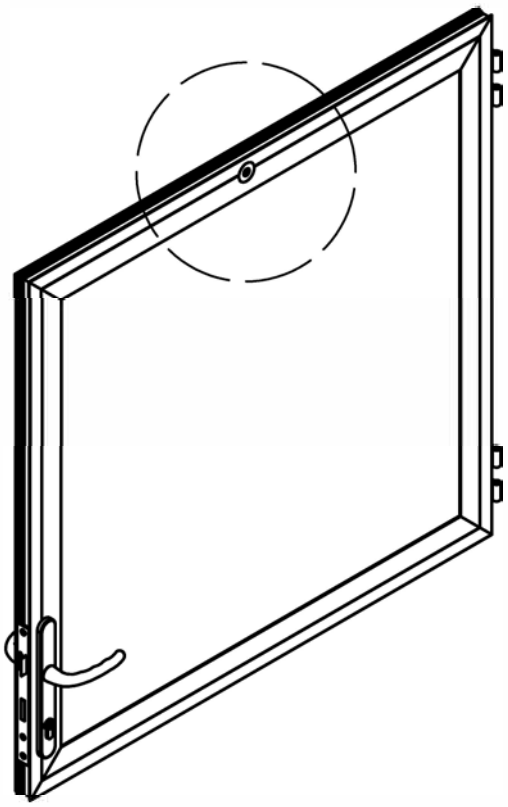
1




4x
Repeat for
top and
bottom hinges
4
Vertical Door Frame
(hinge side
w/ hinge holes)
7
Hinge
17
Panhead Screw
4.2 x 13mm

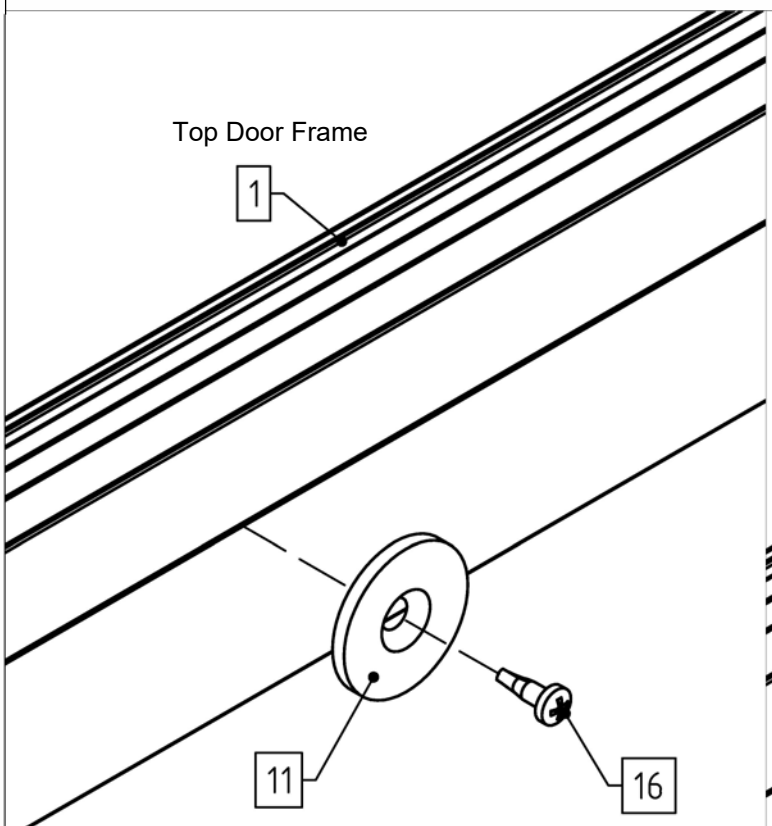
A Exterior View

Flip Door Over



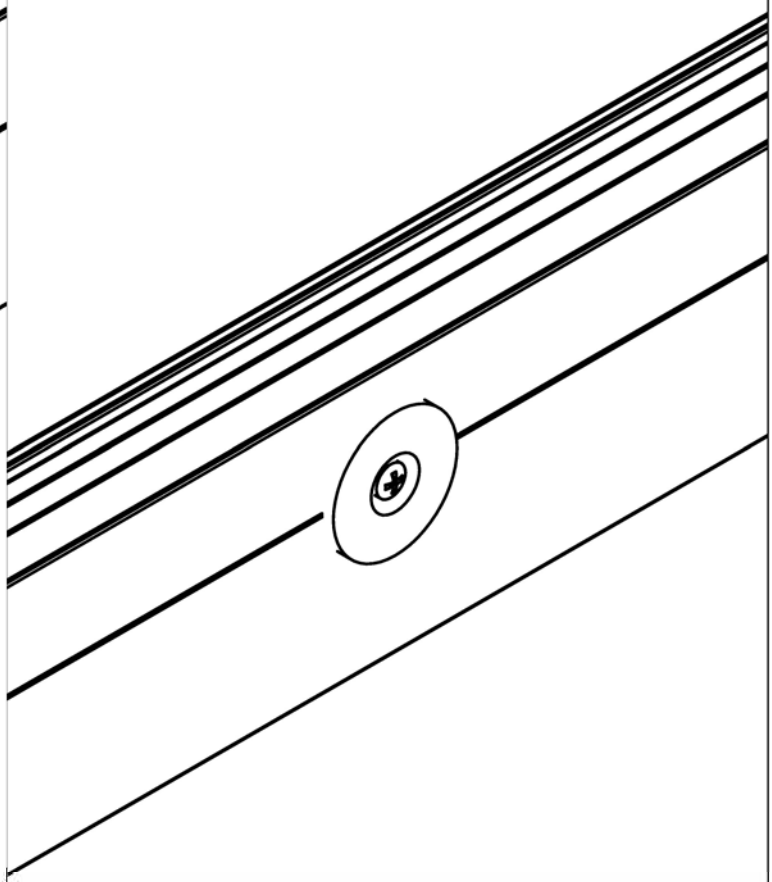
IMPORTANT! It is recommended to install this disc AFTER the full greenhouse is assembled as placement may vary based on your particular conditions!

Note: No drilling hole available. Use the self-tapping screw to drill into the bottom profile.



Metal disk for magenetic door catch

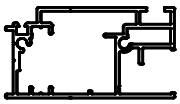
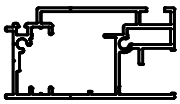
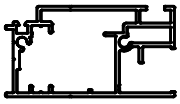
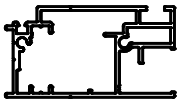
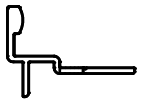
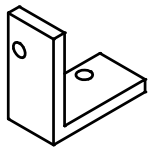
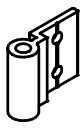
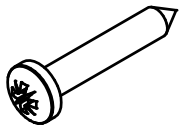
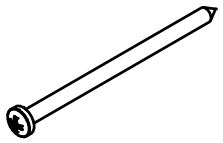
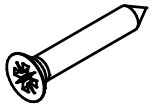
Panhead Screw (self-tapping) 3.9x13mm (for magnetic catch)



Note: You will have 2 lower doors, one fro the front gable and one for the rear gable.

Lower Door Assembly

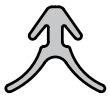
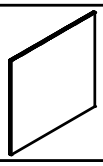
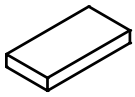
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P059–26–01–00–00–1	Top Door Frame (with holes)	1	955 mm 37 5/8"
2		P059–27–01–00–00–1	Bottom Door Frame (with drainage hole)	1	955 mm 37 5/8"
3		P059–28–01–00–00–1	Vertical Door Frame (with sash lock holes)	1	930 mm 36 5/8"
4		P059–32–01–00–00–1	Vertical Door Frame (hinge side w/ hinge holes)	1	930 mm 36 5/8"
5		P061–03–01–00–00–1	Upper flange	1	949 mm 37 3/8"
6		9999000065	Corner connection angle	4	
7		9999000023	Sash Lock	1	
8		9999000716	Hinge	4	30 mm
9		9999000596	Panhead Screw 4.2 x 25mm (to connect corners of doors)	4	DIN 7981
10		9999000662	Panhead Screw 4.2 x 70mm (to connect corners of doors)	4	DIN 7981
11		9999000152	Countersunk Screw 3.5 x 22mm (screws for sash lock)	2	DIN 7982
12		9999000144	Panhead Screw 4.2 x 13mm (screws for hinges and to attach upper flange)	11	DIN 7981

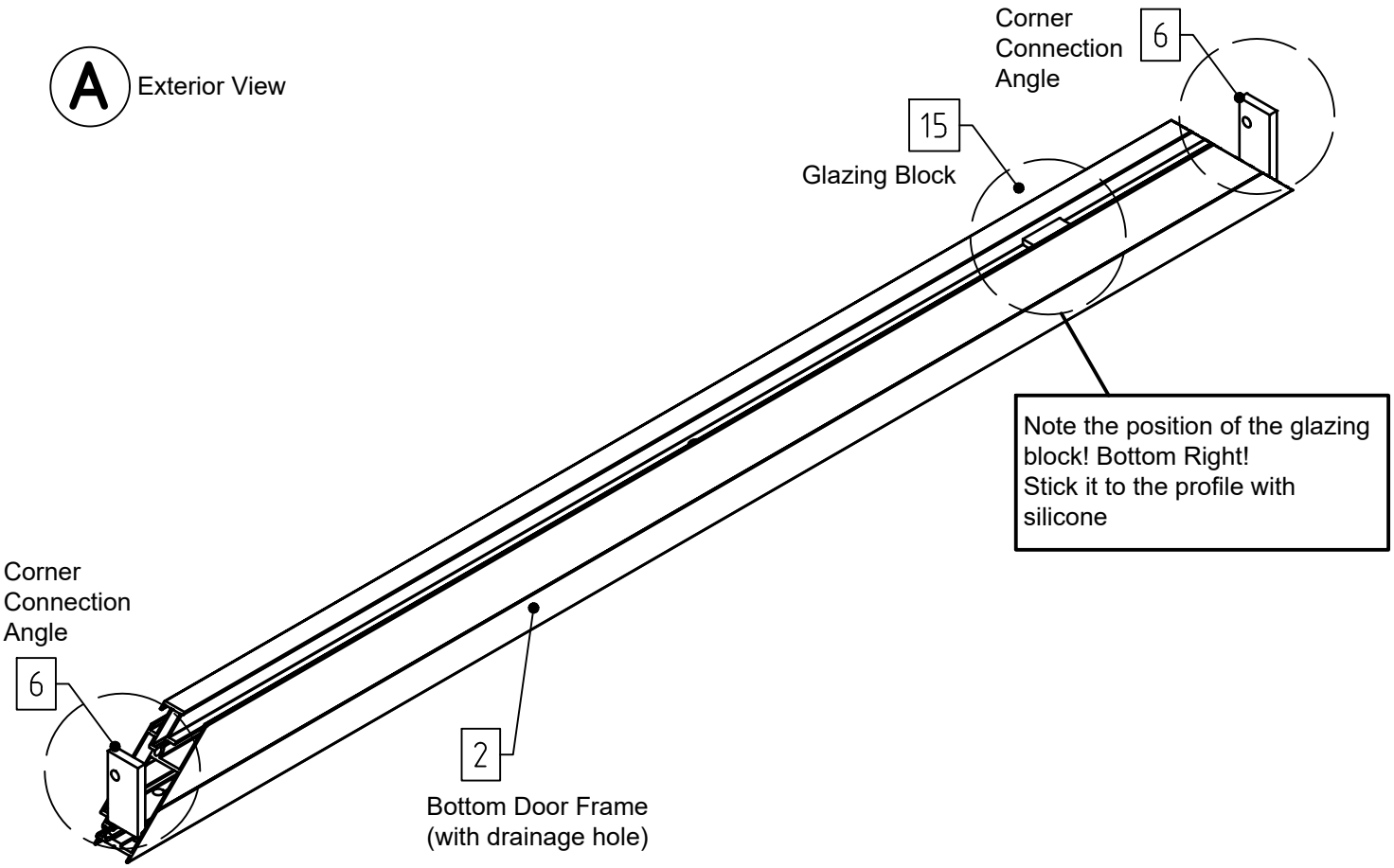
Note: You will have 2 lower doors, one fro the front gable and one for the rear gable.

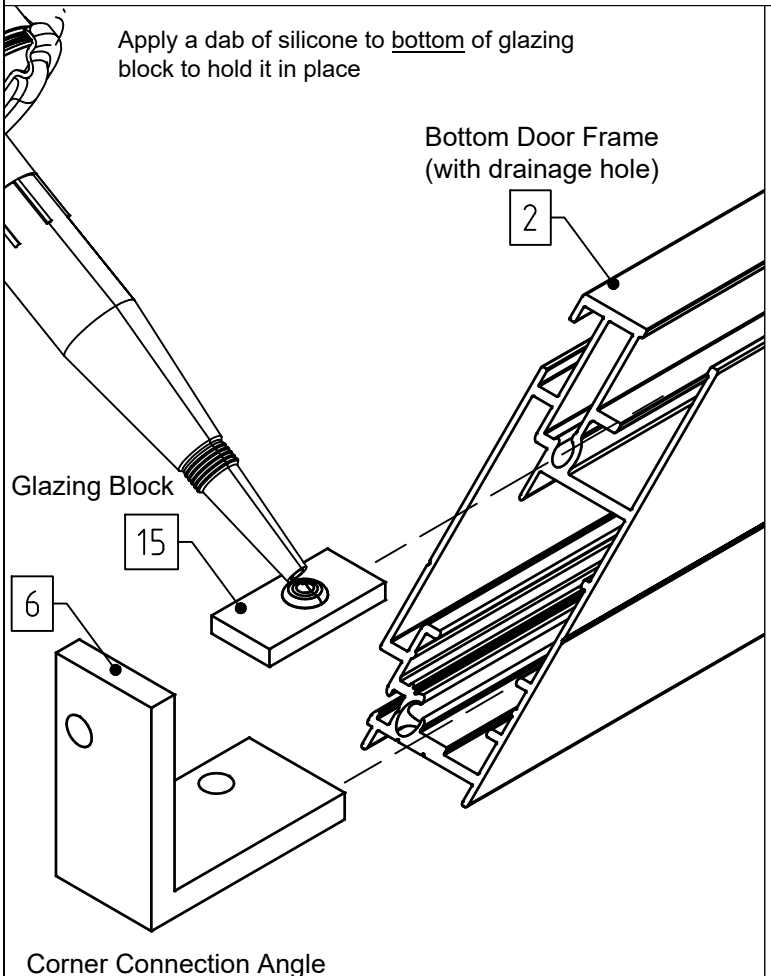
Lower Door Assembly

Packlist and Parts

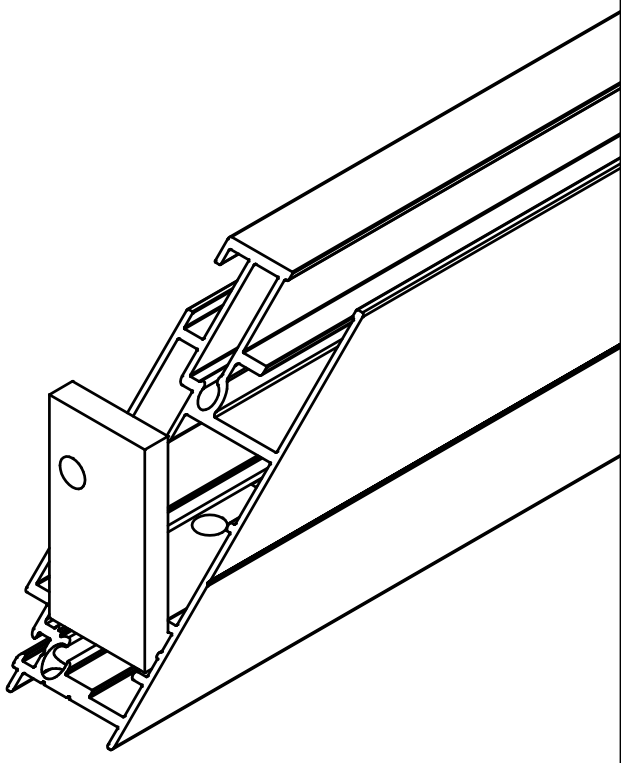
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000032	Y Gasket	3,0 lfdm. 9.85 feet	
14			Polycarbonate Panel 847 x 821mm 33 3/8" x 32 5/16"	1	
15		9999001240	Glazing Block	2	
16					
17					
18					
19					
20					
21					
22					
23					
24					

A Exterior View

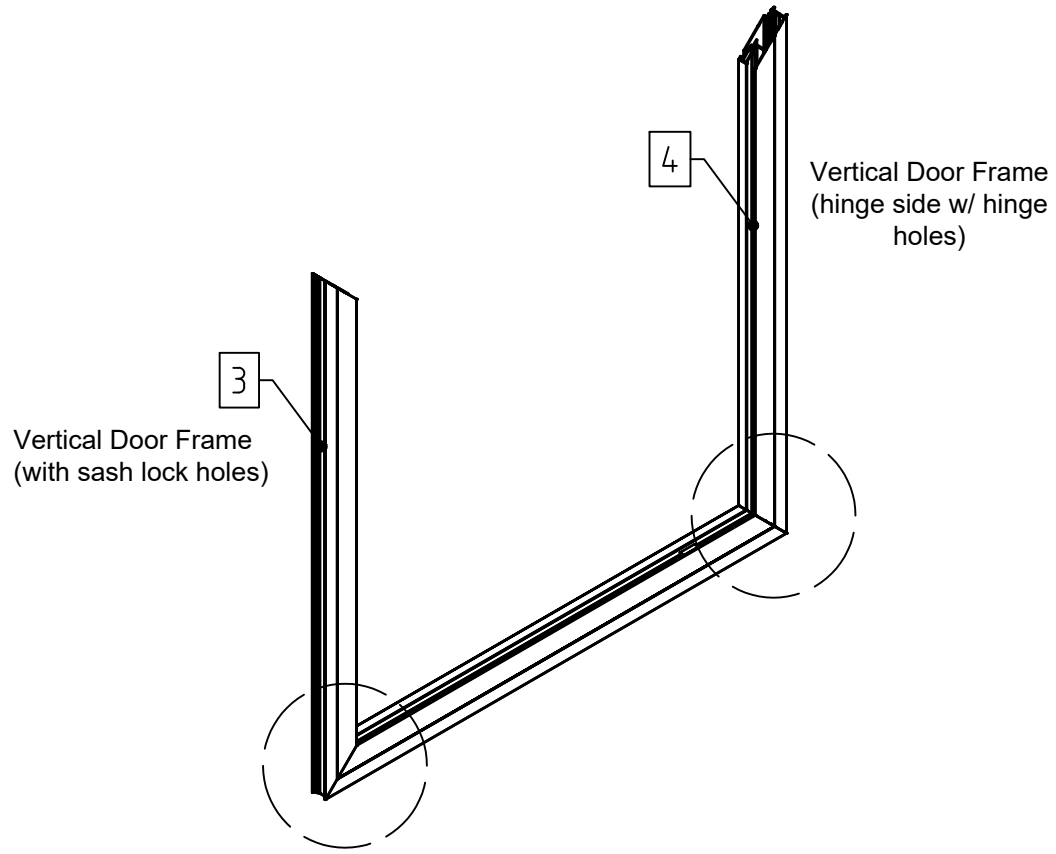




2x Repeat for both sides of the Bottom Door Frame

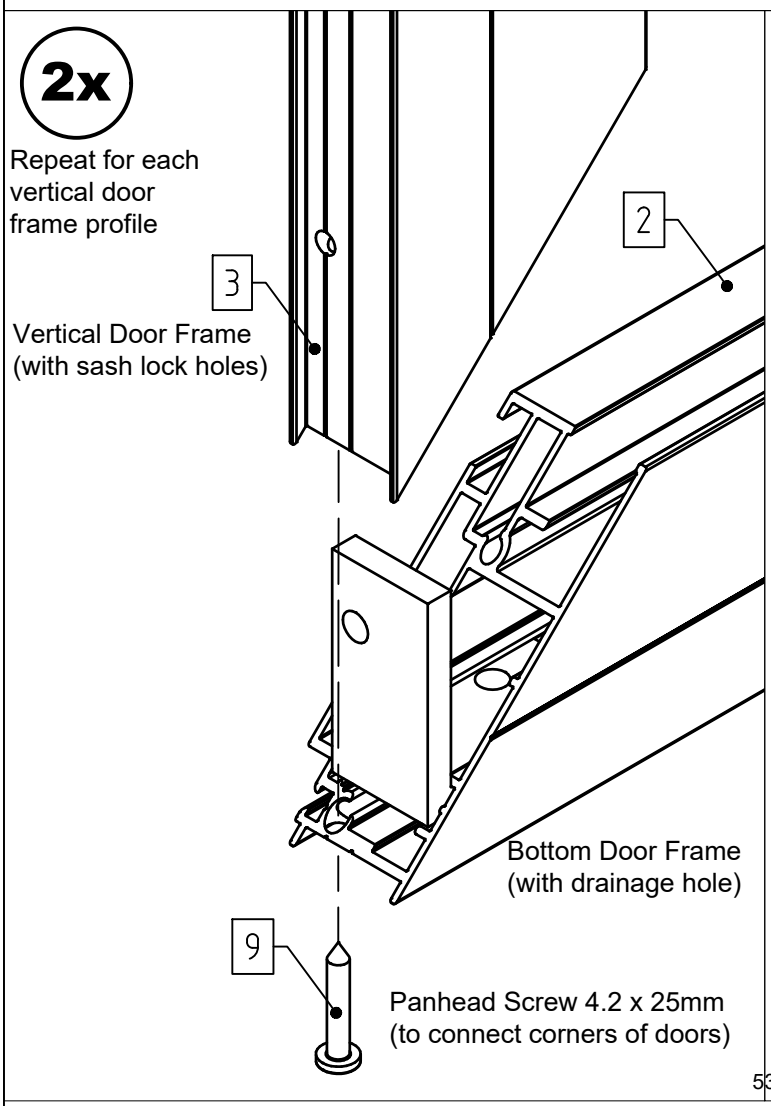


A Exterior View



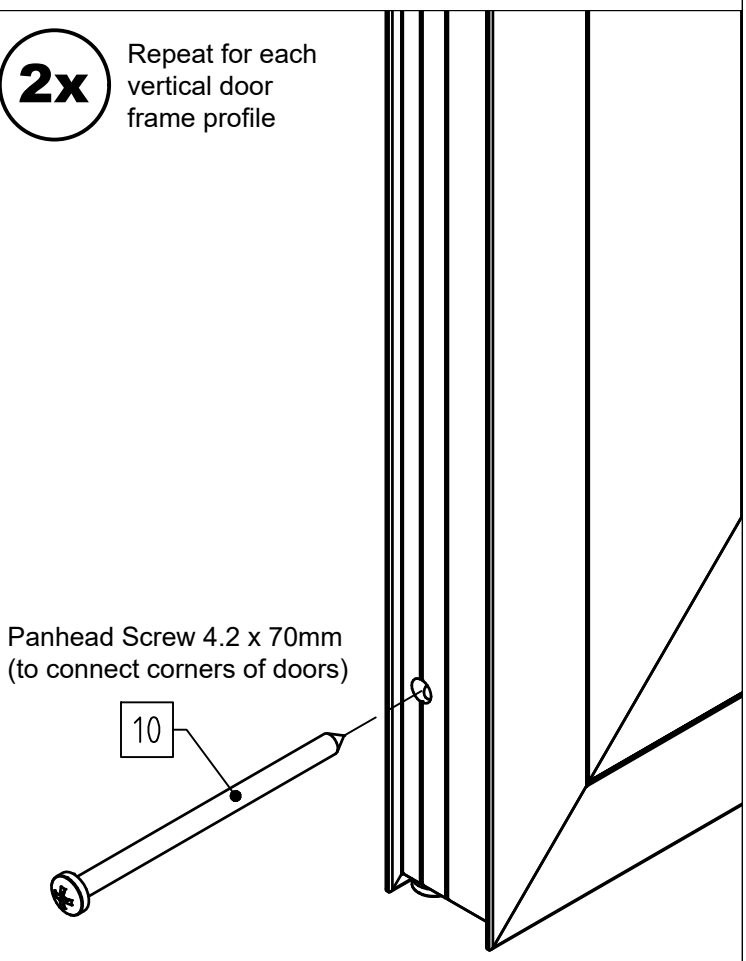
2x

Repeat for each
vertical door
frame profile

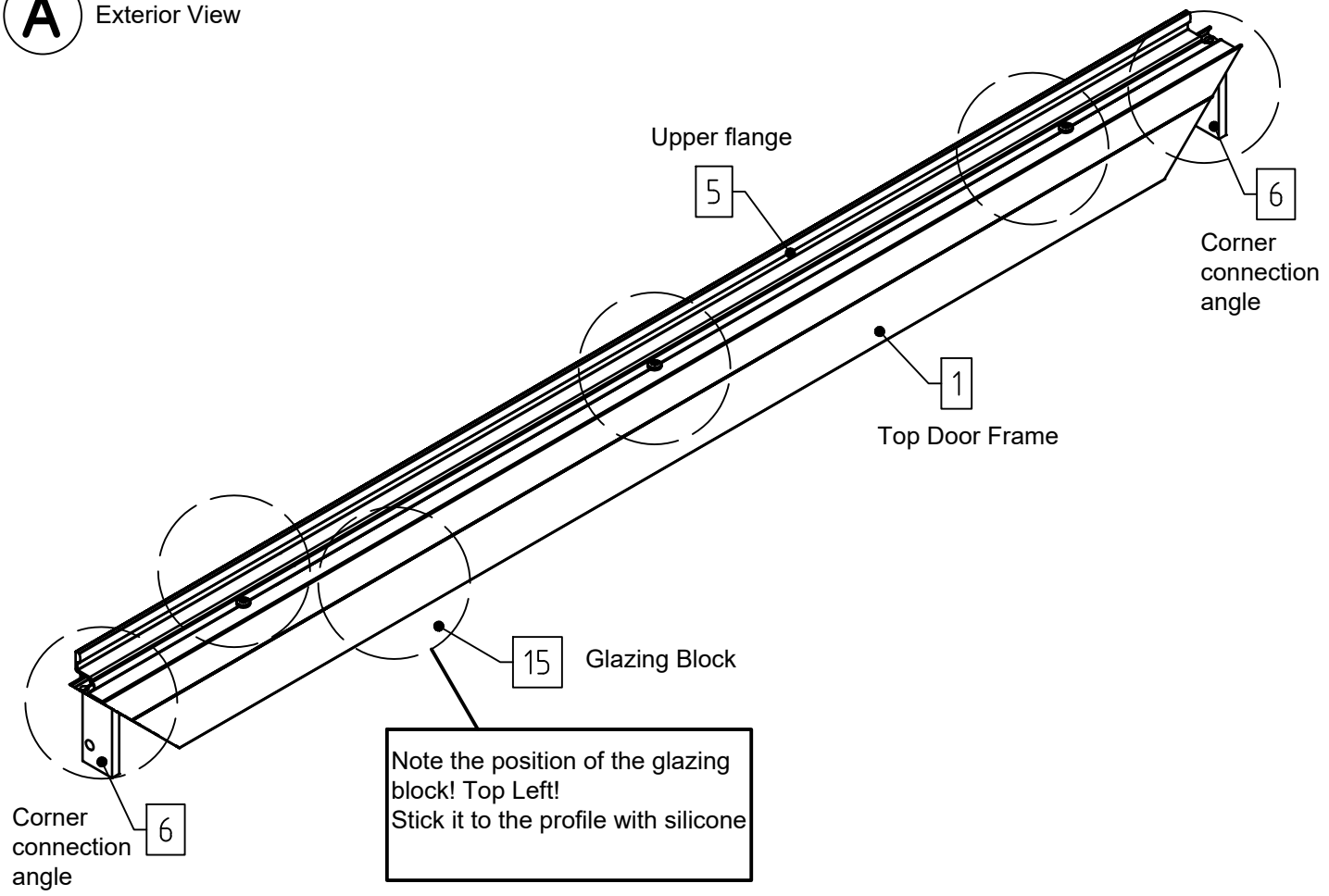


2x

Repeat for each
vertical door
frame profile

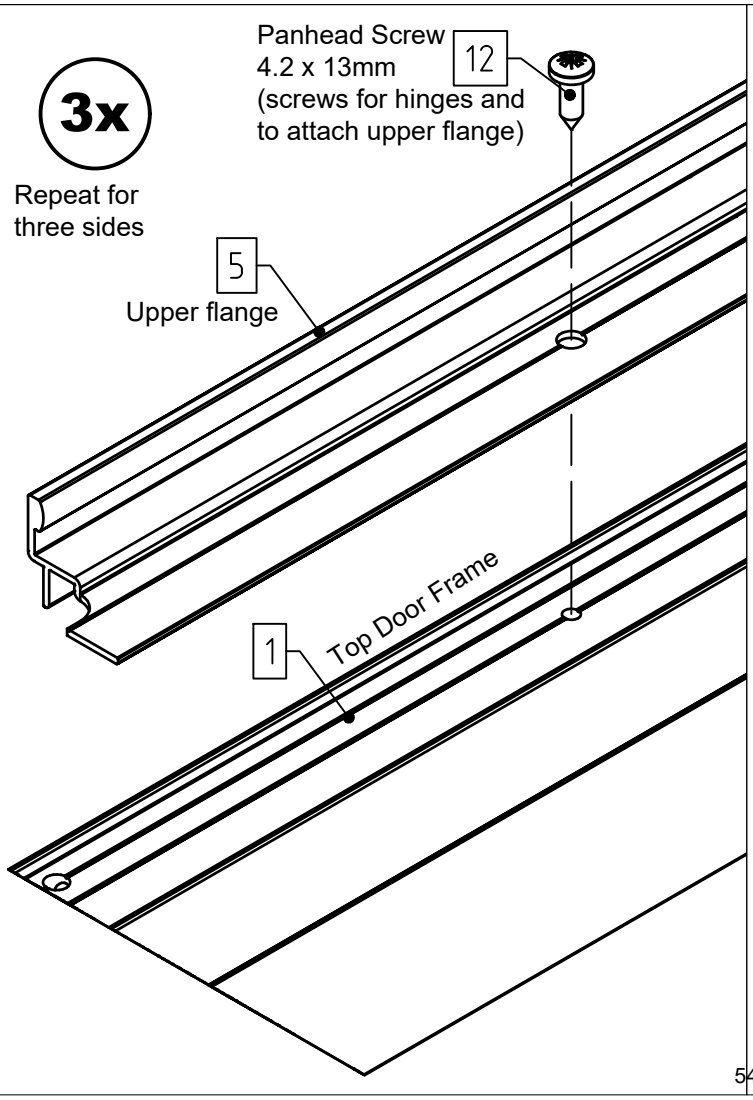


A Exterior View



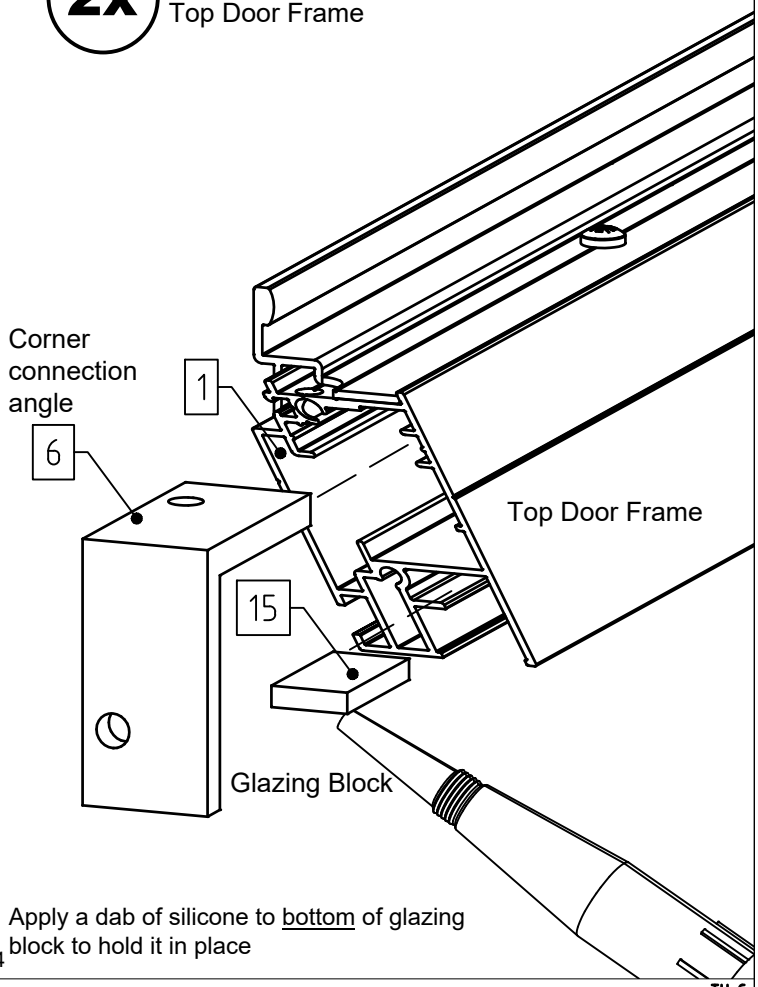
3x

Repeat for three sides



2x

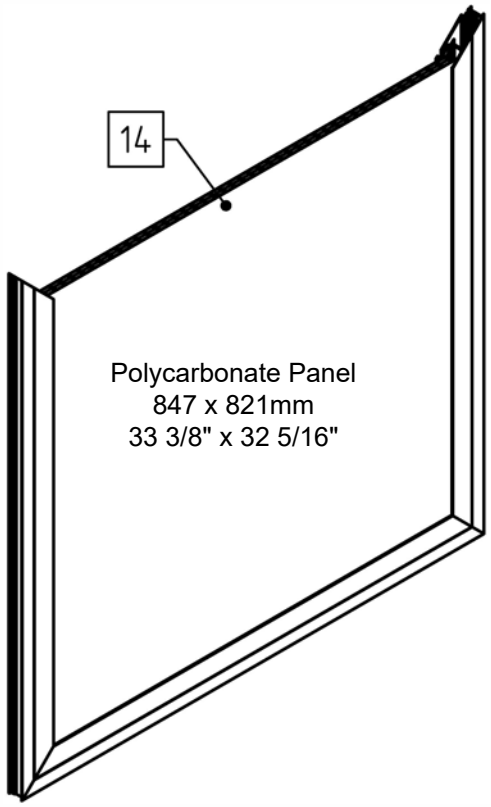
Repeat for both sides of the Top Door Frame

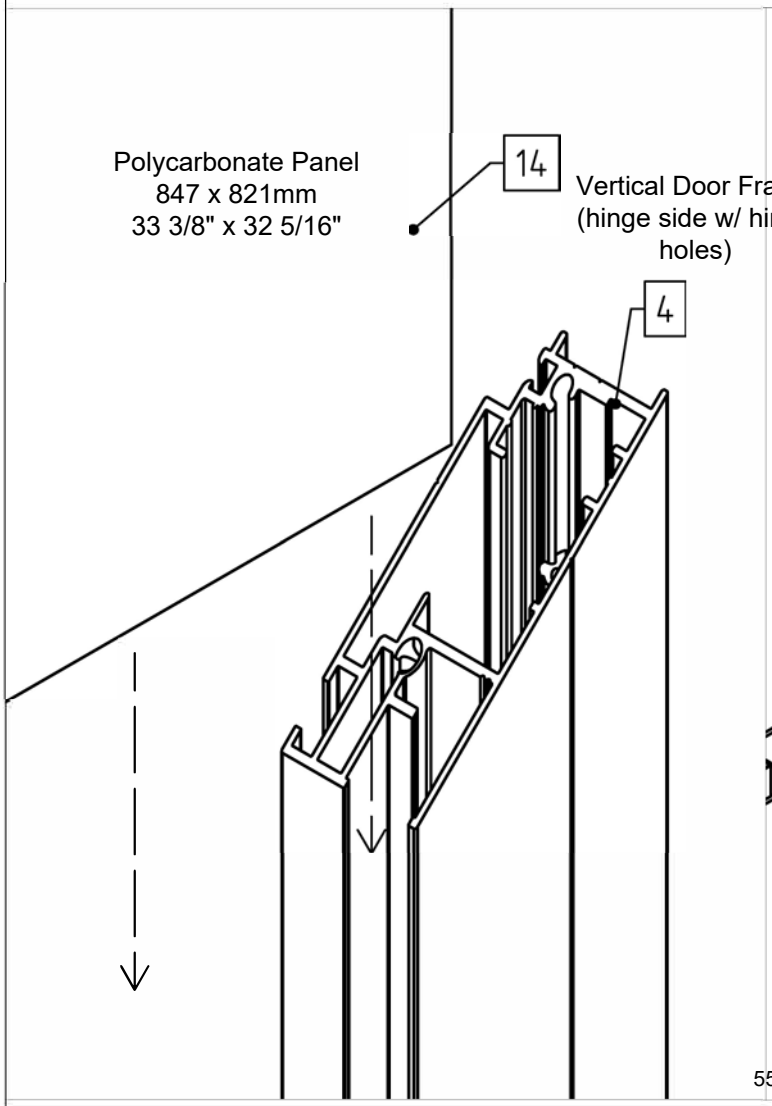


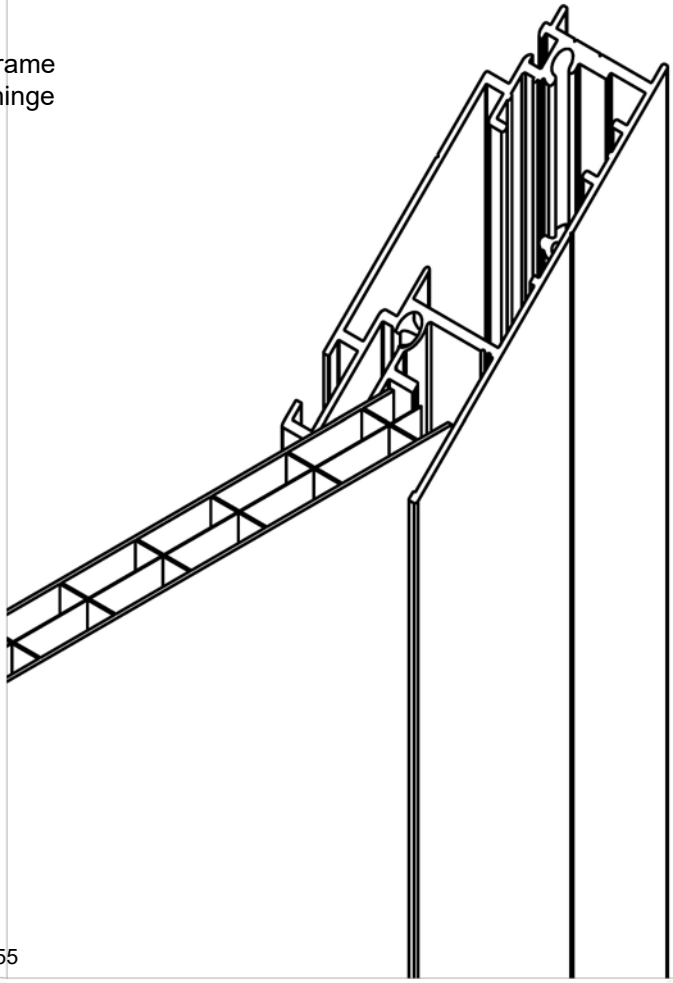
Apply a dab of silicone to <u>bottom</u> of glazing block to hold it in place

TU-C

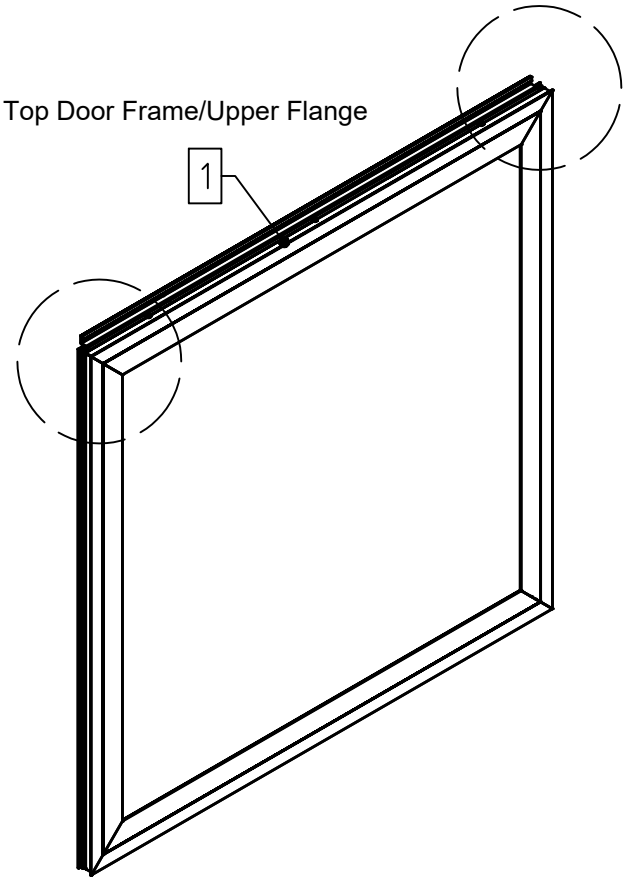
A Exterior View



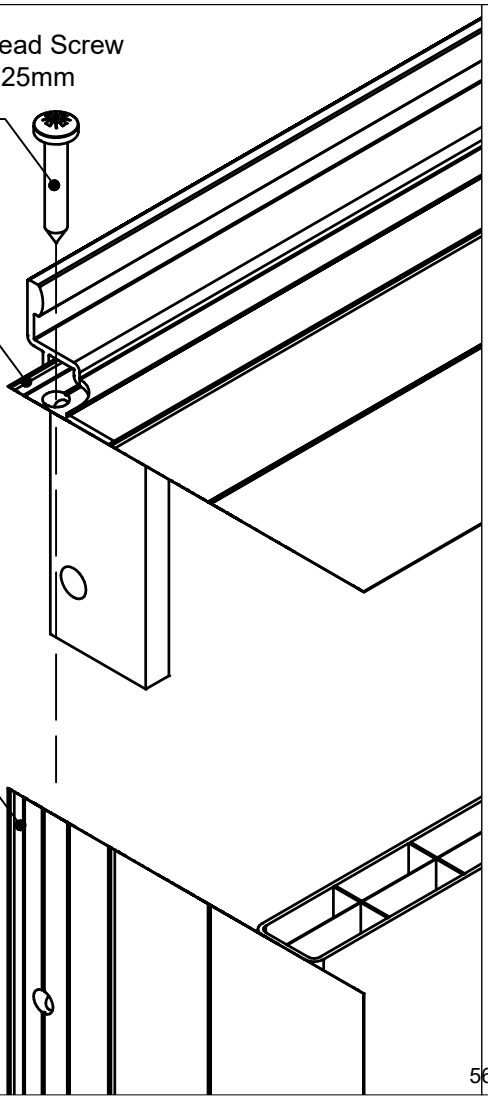




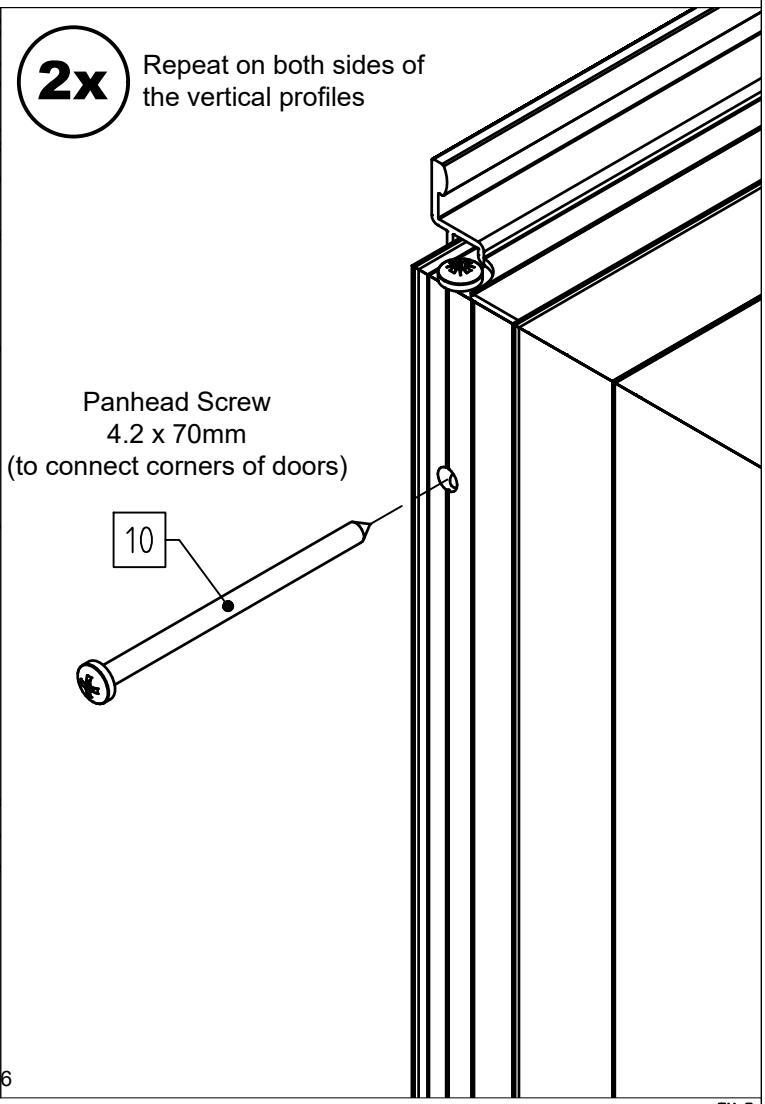
A Exterior View



2x Repeat on both sides of the top door frame.



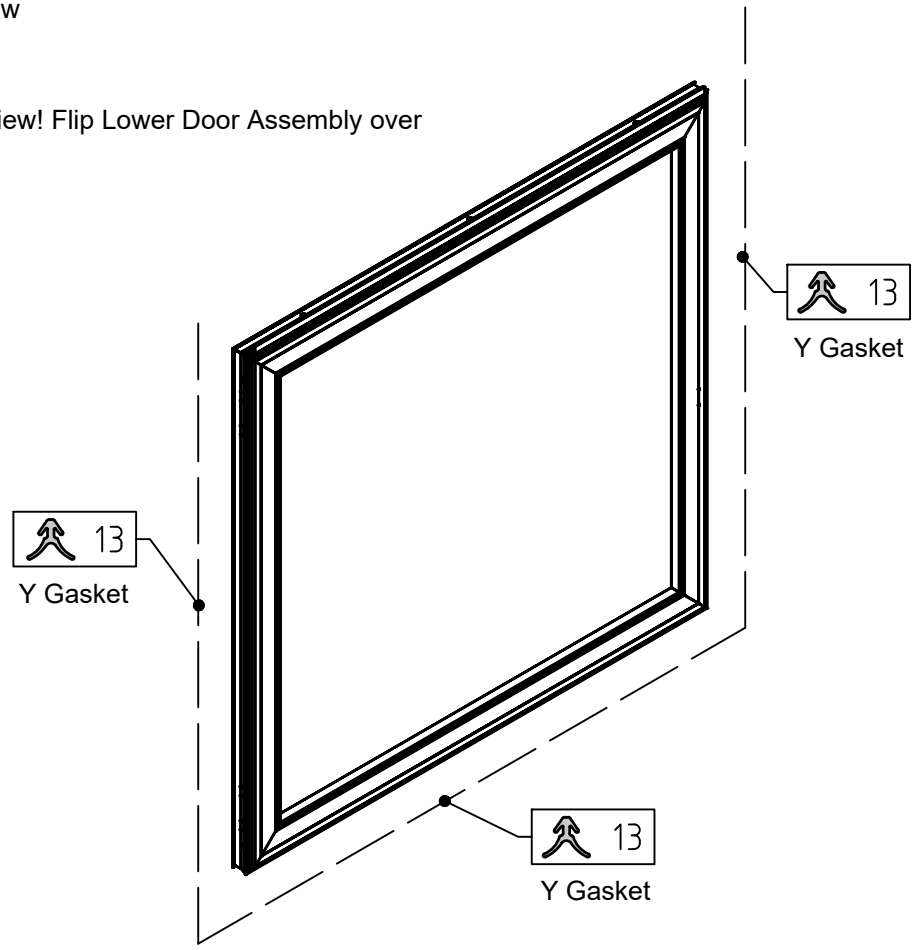
2x Repeat on both sides of the vertical profiles

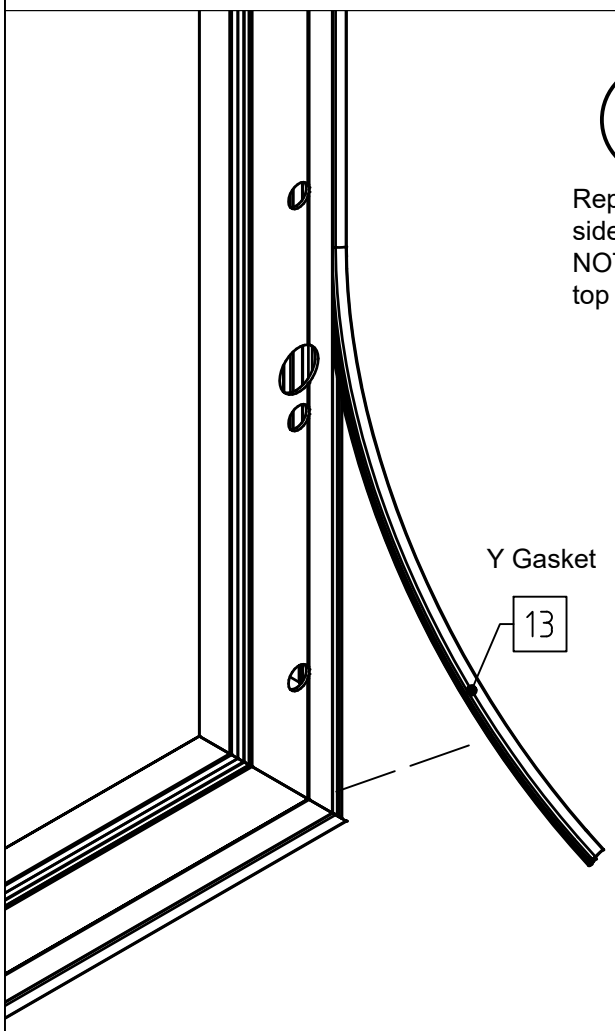


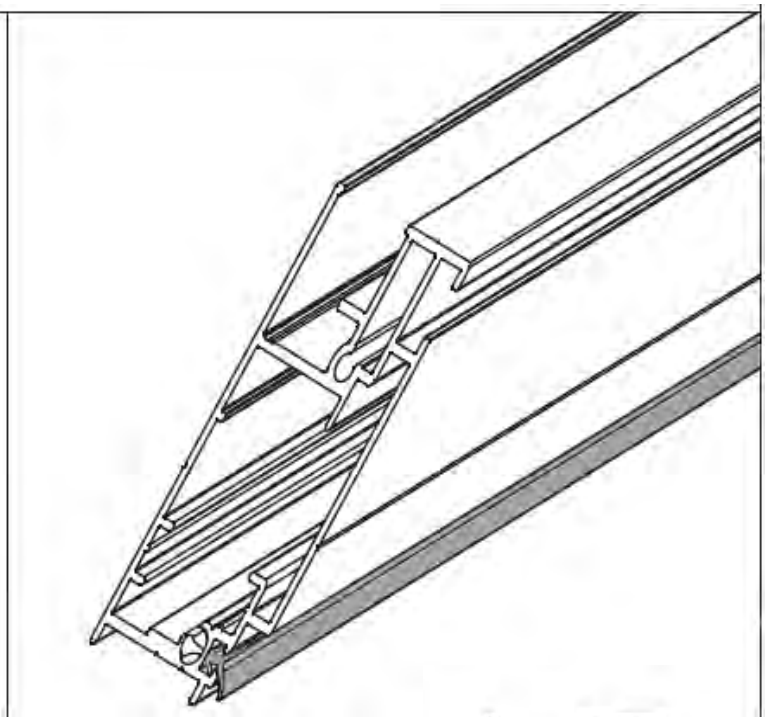
Interior View

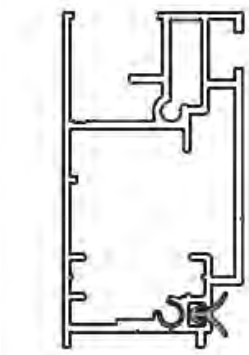
Reverse View! Flip Lower Door Assembly over

Y-Gasket





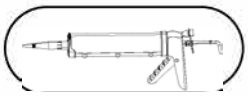




VD

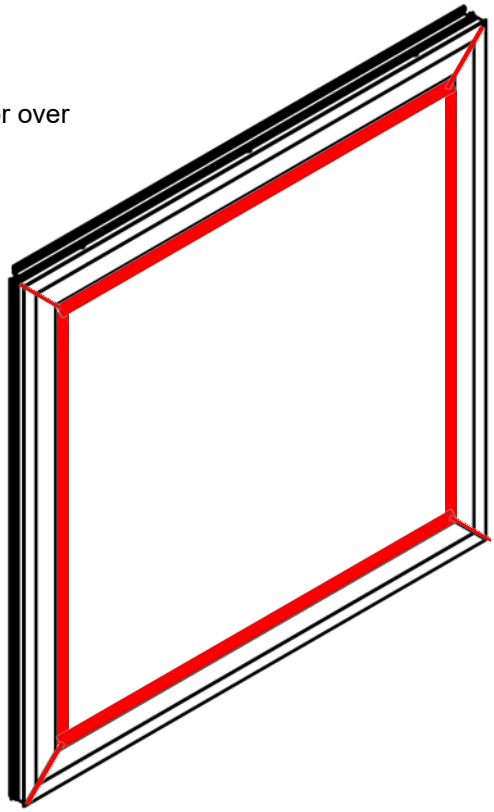
A Exterior View

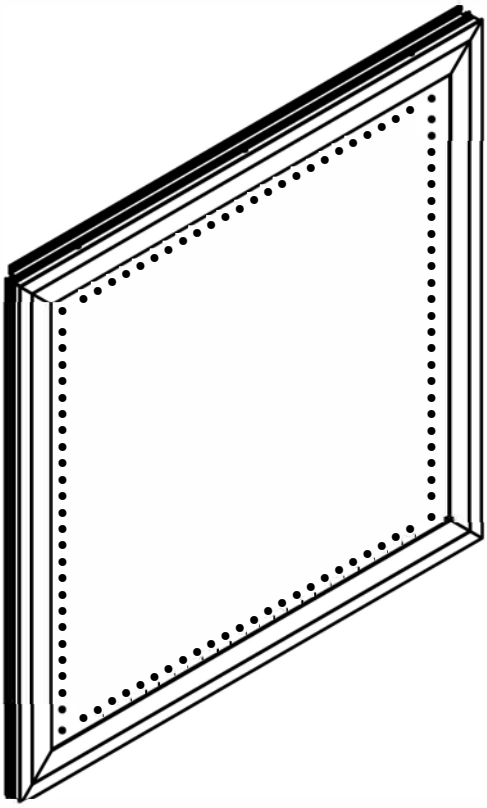
Reverse View! Flip Lower Door over

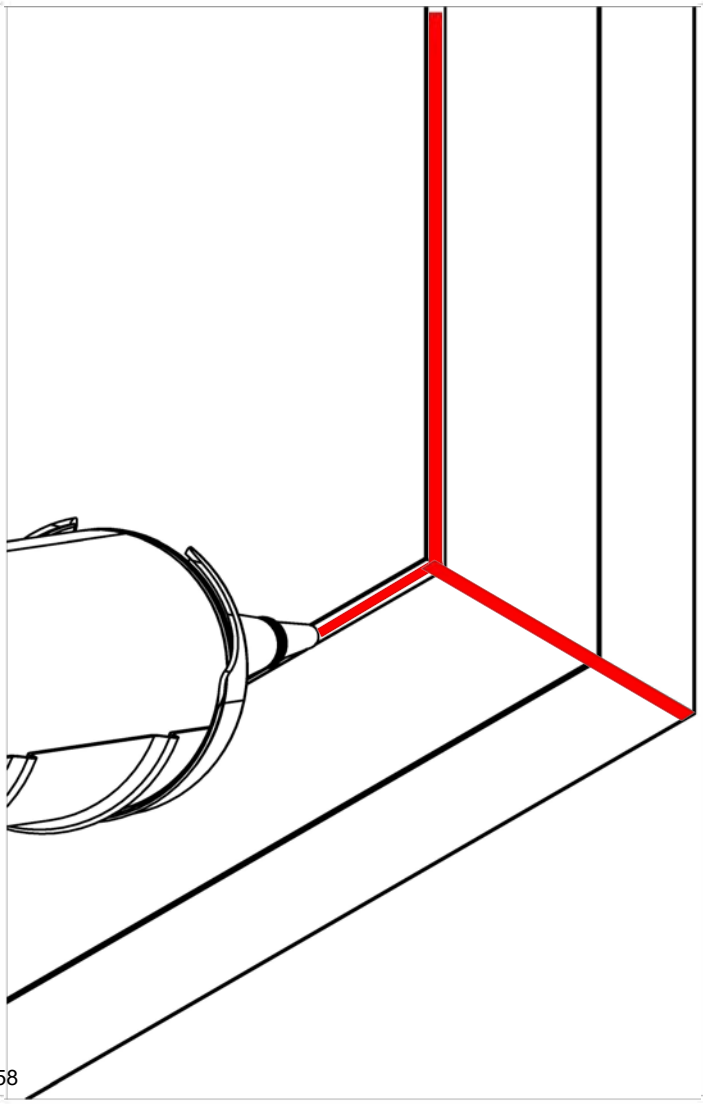


Apply silicone where the polycarbonate meets the metal profile and along the edge to prevent leaking.

Silicone along where the red lines are.

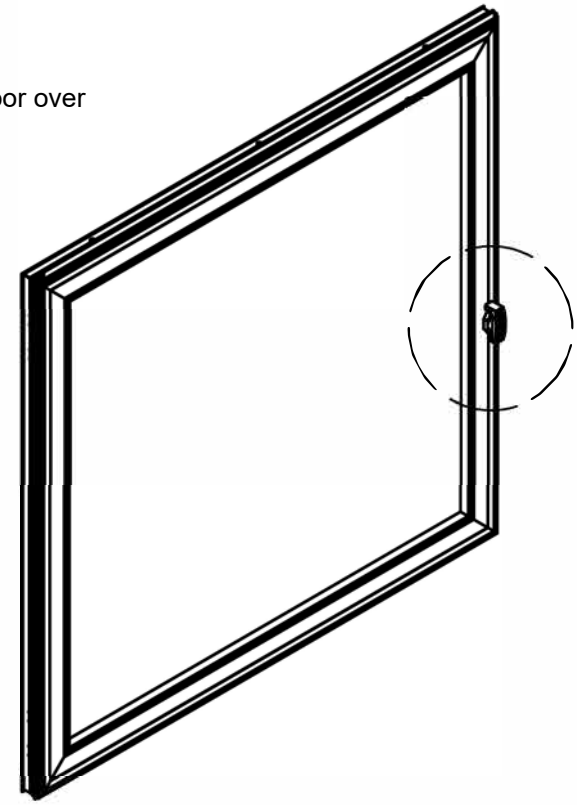


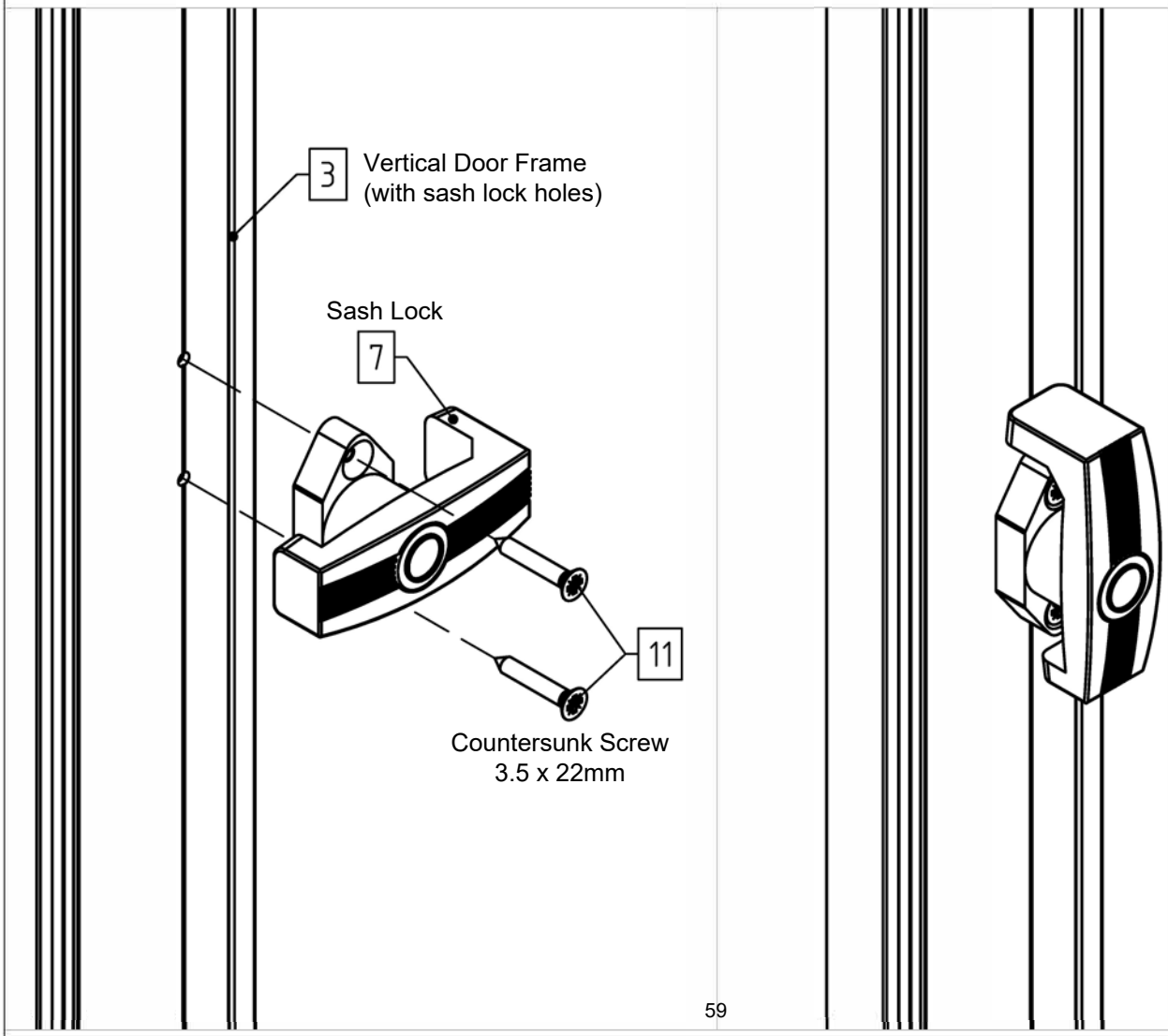




Interior View

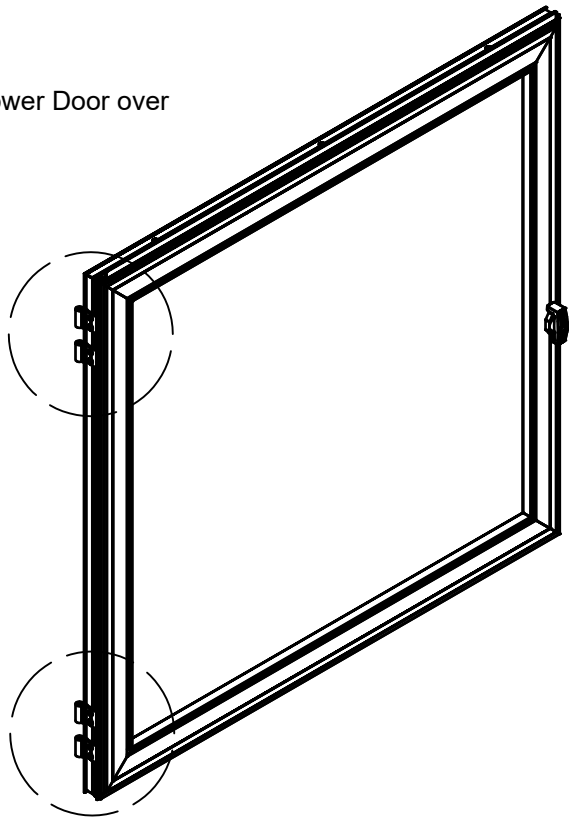
Reverse View! Flip Lower Door over





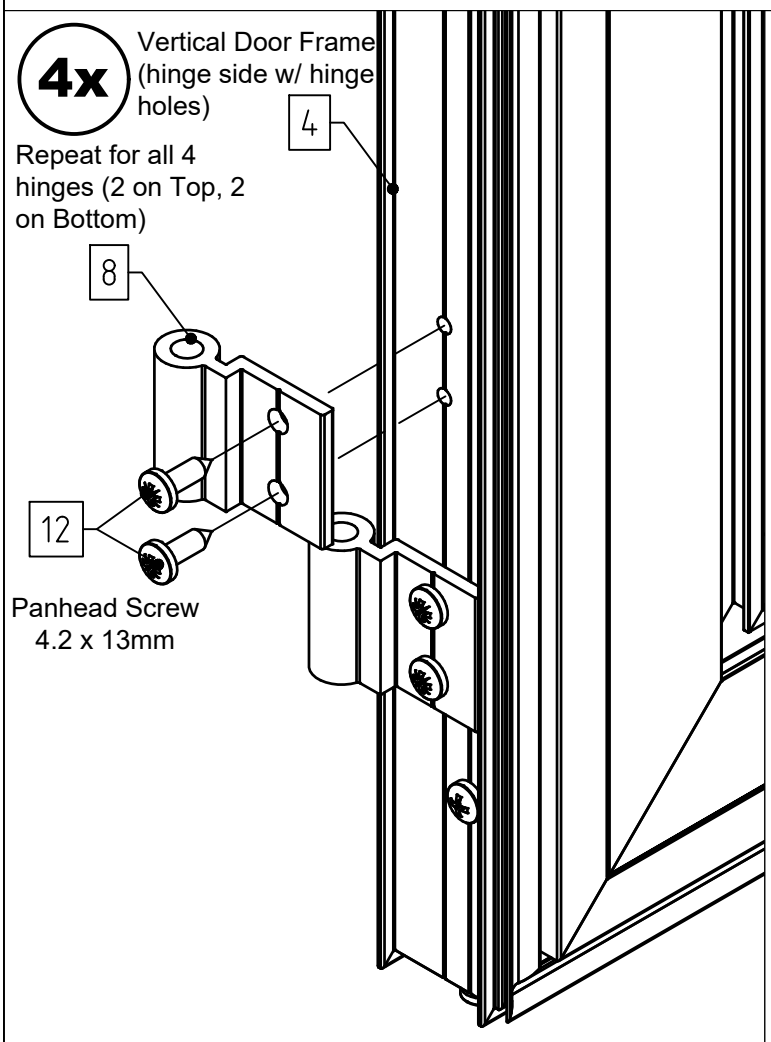
Interior View

Reverse View! Flip Lower Door over

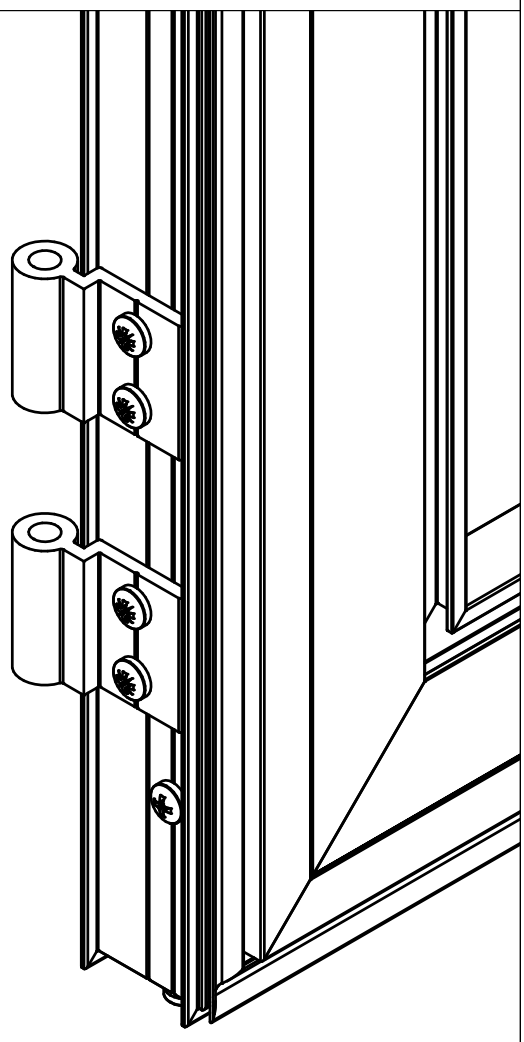


4x Vertical Door Frame (hinge side w/ hinge holes)

Repeat for all 4 hinges (2 on Top, 2 on Bottom)

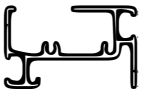
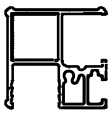
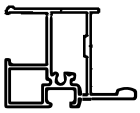
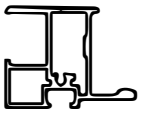
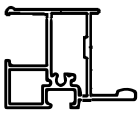
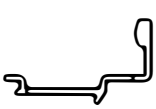


Panhead Screw
4.2 x 13mm



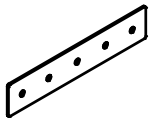
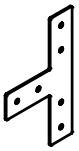
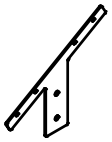
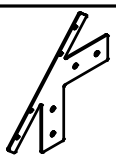
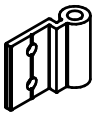
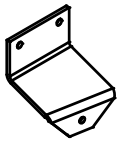
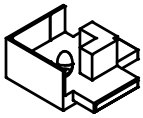
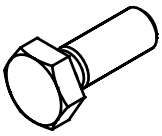
Front and rear gables are identical

Gable Assembly
Packlist and Parts

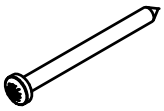
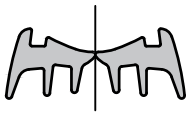
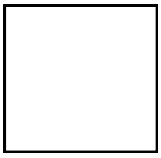
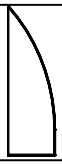
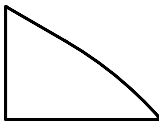
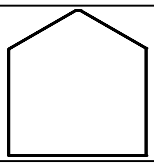
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P066–11–01–00–07–1	Soil/Floor Profile (Gable)	1	4145 mm 163 3/16"
2		P067–11–01–00–07–1	Edge curve (Left from outside)	1	3879 mm 152 3/4"
3		P067–12–01–00–07–1	Edge curve (Right from outside)	1	3879 mm 152 3/4"
4		P065–20–01–00–07–1	Door Frame (left from outside)	1	2645 mm 104 1/8"
5		P065–21–01–00–07–1	Door Frame (right from outside)	1	2645 mm 104 1/8"
6		P065–22–01–00–07–1	Door Frame (Top)	1	965 mm 37 15/16"
7		P068–23–01–00–07–1	Vertical Post - angle cut (left from outside)	1	1929 mm 75 15/16"
8		P068–24–01–00–07–1	Vertical Post - angle cut (right from outside)	1	1929 mm 75 15/16"
9		P068–25–01–00–07–1	Horizontal Crossbar (Middle)	4	952 mm 37 1/2"
10		P032–13–01–00–07–1	Glazing Holder Above Door (Left)	1	723 mm 28 1/2"
11		P032–14–01–00–07–1	Glazing Holder Above Door (Right)	1	723 mm 28 1/2"
12		P086–02–01–00–07–1	Door Stop Floor	1	969 mm 38 1/8"

Front and rear gables are identical

Gable Assembly
Packlist and Parts

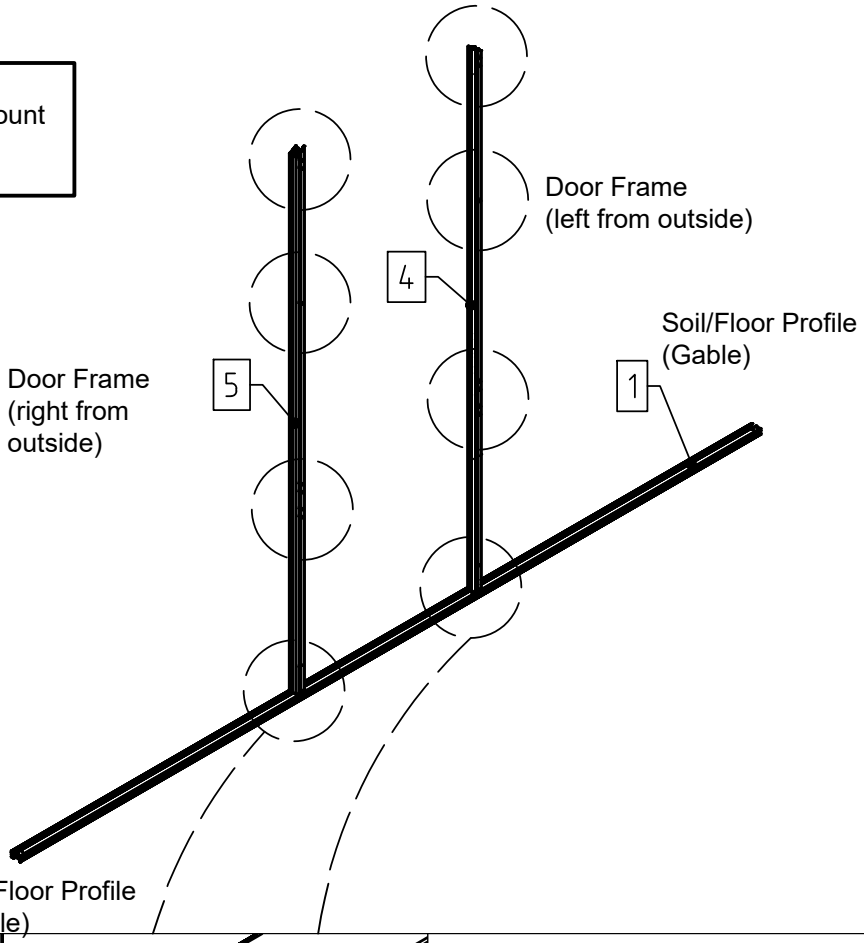
Part #	Illustation	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000194	5-Hole Mounting Bracket	2	
14		9999000195	T-Shape Mounting Bracket	4	
15		9999000196	Slanted T-Shape Mounting Bracket	2	
16		9999000197	Slanted K-Shape Mounting Bracket	2	
17		9999000660	Striking Plate	1	
18		9999000716	Hinge	4	30 mm 1 1/8"
19		9999000444	Door Stop	1	
20		9999000638	Magnet	1	Ø25 mm 63/64"
21		9999000004	Soil Profile Corner Connector (Black)	2	
22		9999000183	Bolt M6 x 16mm	48	DIN 933
23		9999000128	Nut M6	47	DIN 934
24		9999000144	Panhead Screw 4.2 x 13mm	12	DIN 7981

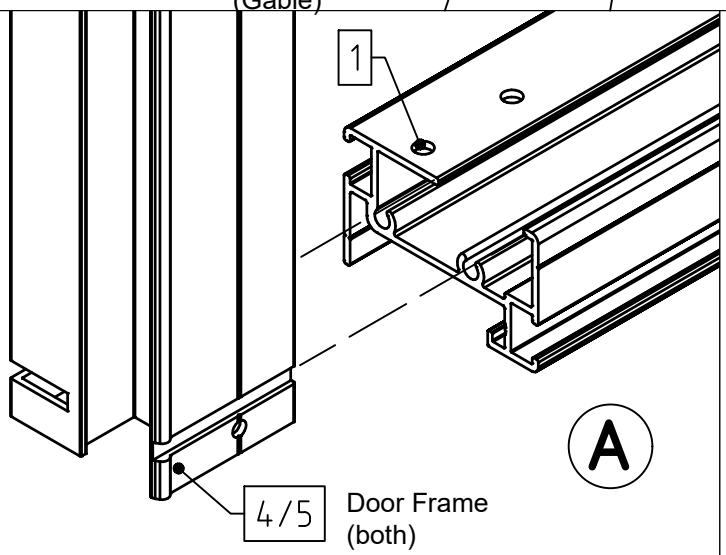
Gable Assembly
Packlist and Parts

Part #	Illustation	Mfr. Part Number	Description	Qty	Length/addt'l info
25		9999000148	Panhead Screw 4.2 x 50mm (to attach left and right crossbars)	2	DIN 7981
26		9999000189	Self Tapping screw w/ panhead 3.5 x 13mm	18	DIN 7981
27		9999000204	Panhead Screw 4.2 x 13mm	3	DIN 7982
28		9999000120	Wedge Gasket 6-8mm	1x 0,952m 37 1/2" 1x 0,571m 22 1/2"	Double String - Pull apart to make 2 strands!
29			Polycarbonate Panel (left and right lower) 980 x 944mm 38 9/16" x 37 1/8"	4	
30			Polycarbonate Panel (curved panels) 602 x 1922mm 23 11/16" x 75 5/8"	2	
31			Polycarbonate Panel (top curve) 980 x 727mm 38 9/16" x 28 5/8"	2	
32			Polycarbonate Panel (5-sided panel) 953 x 1008mm 38 9/16" x 28 5/8"	1	
33					
34					
35					
36					

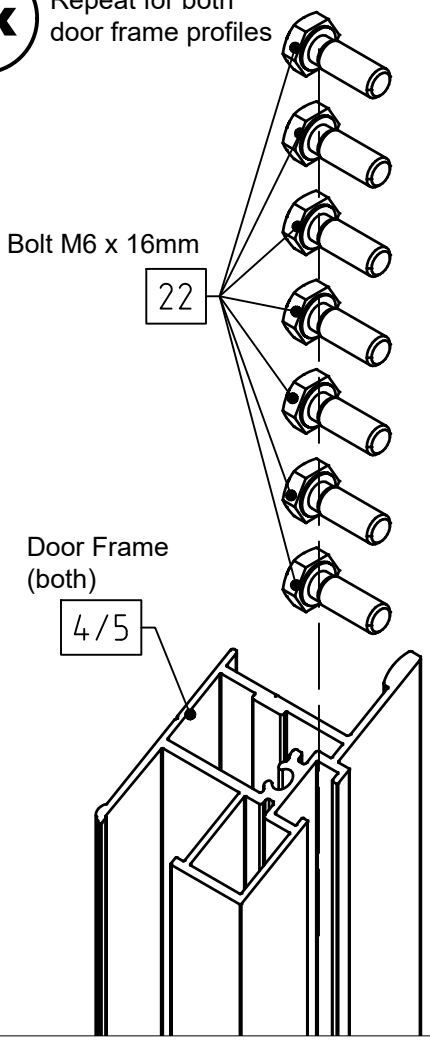
I Interior View

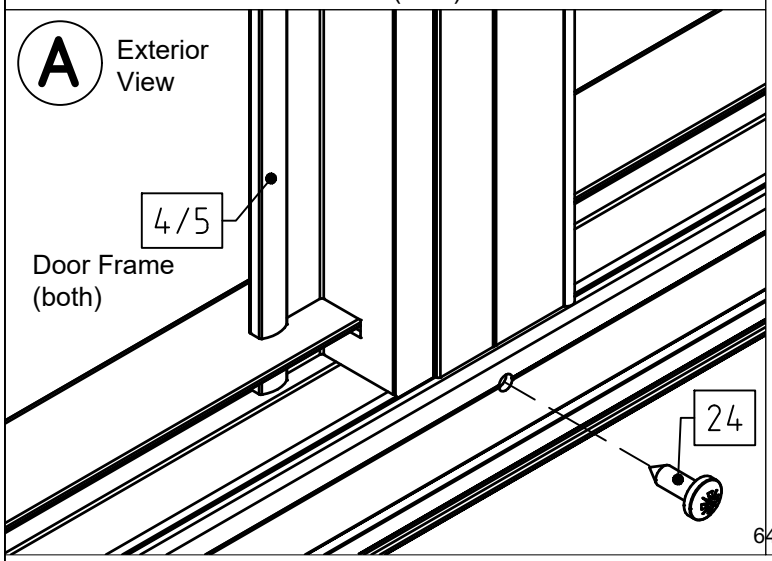
If you are using the foundation frame, mount it on the floor profile before hand!





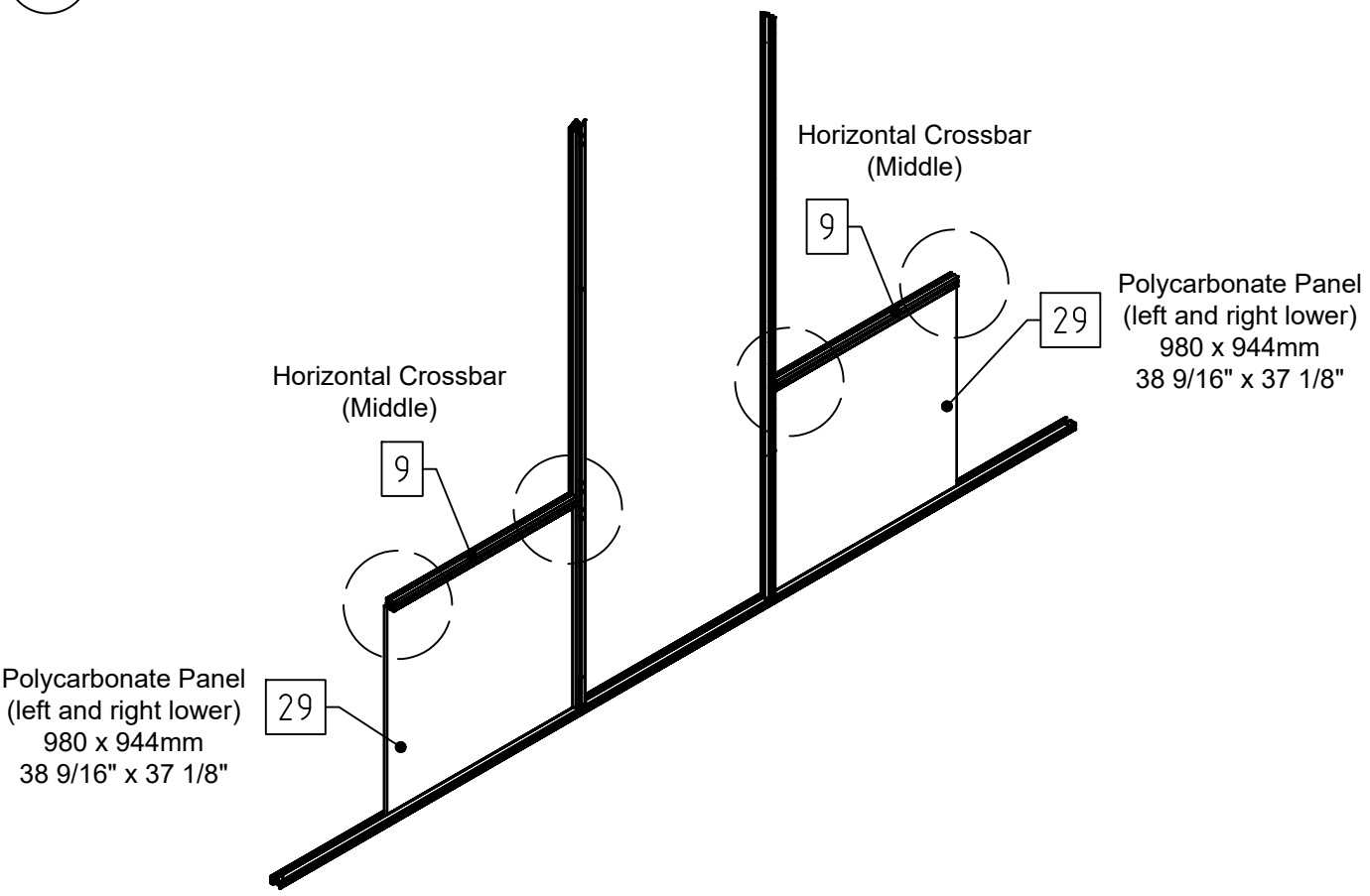
2x Repeat for both door frame profiles





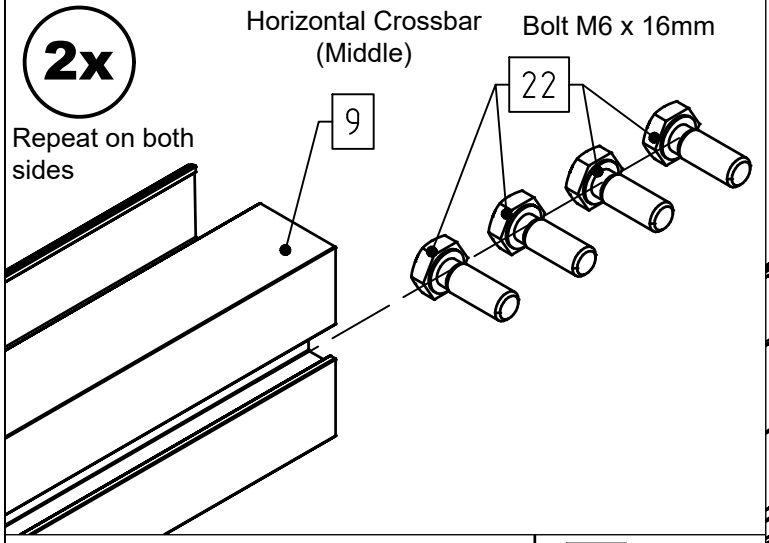
TG-A

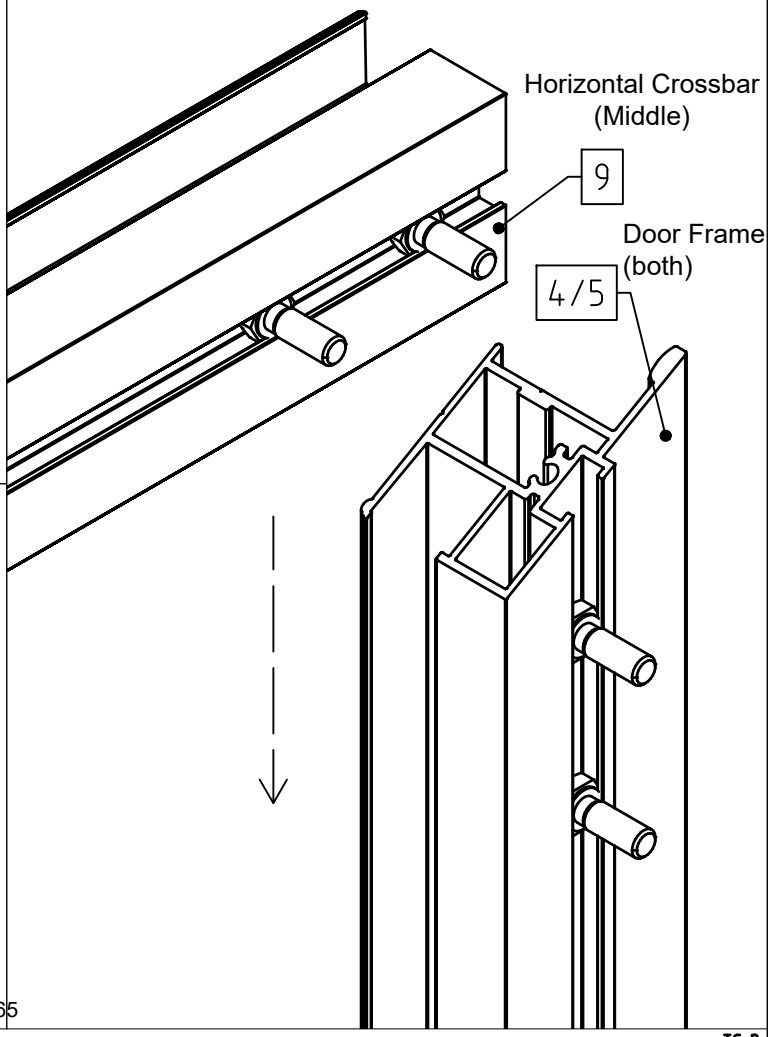
Interior View

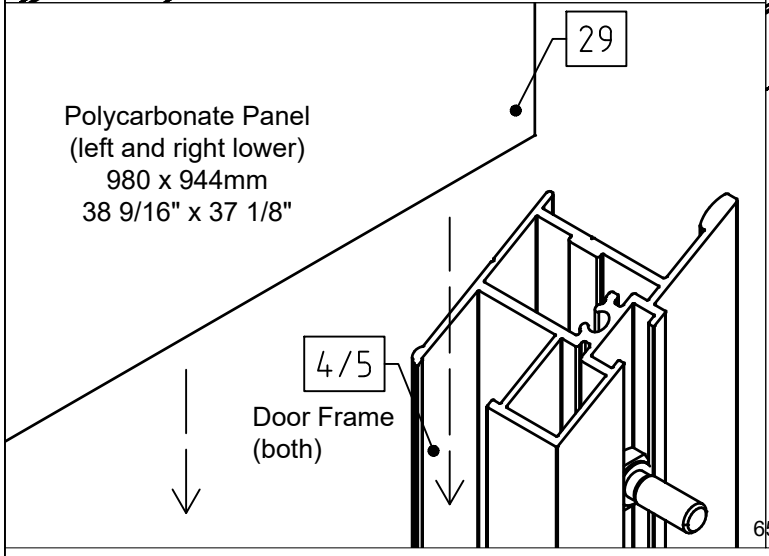


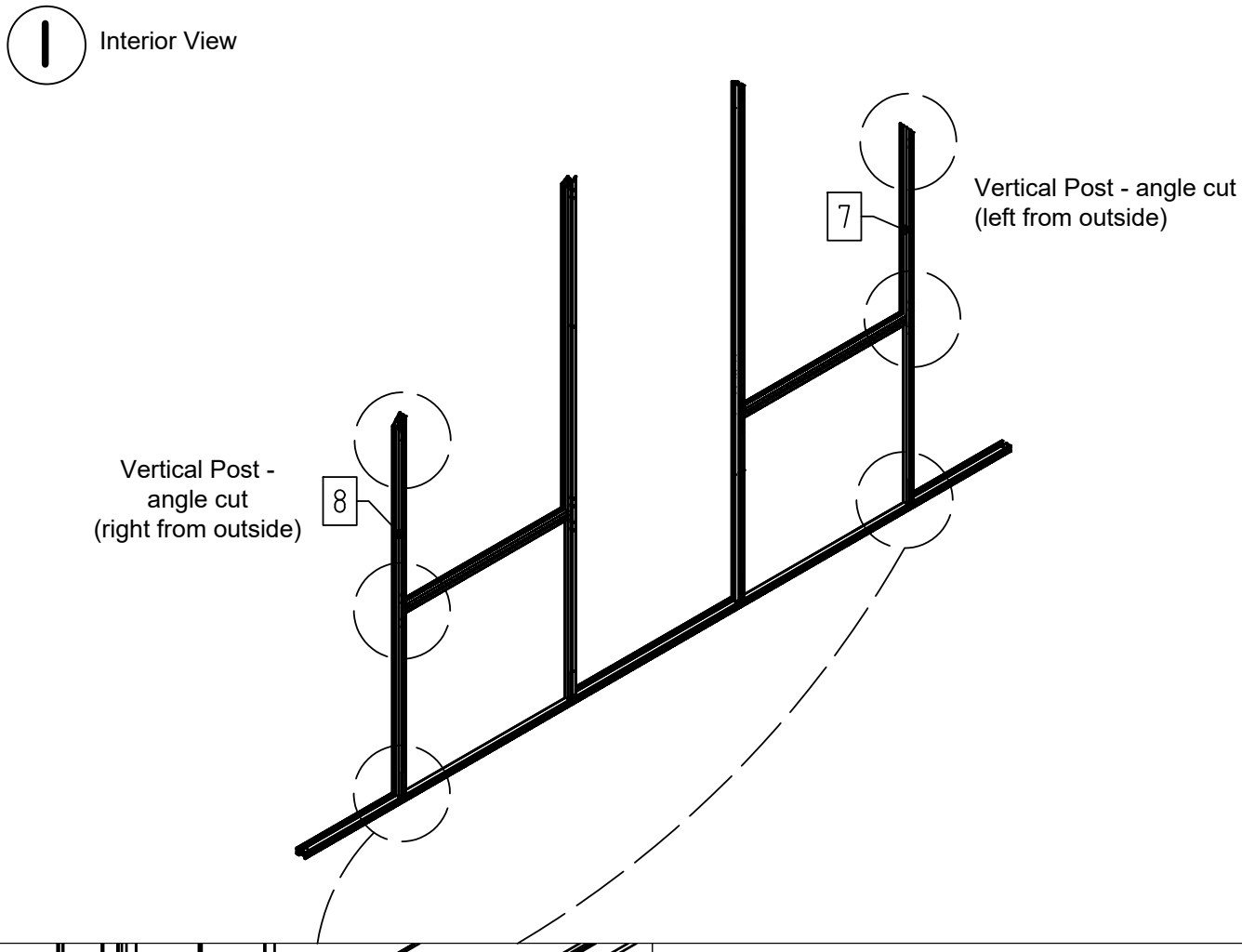
2x

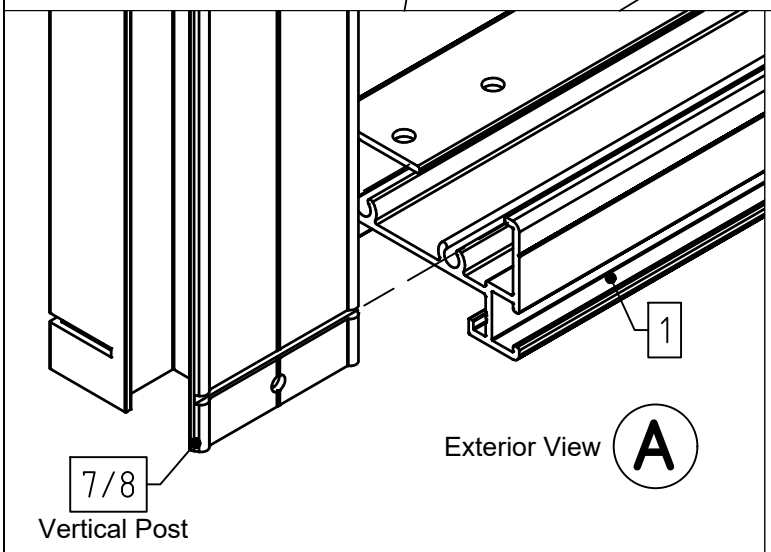
Repeat on both sides

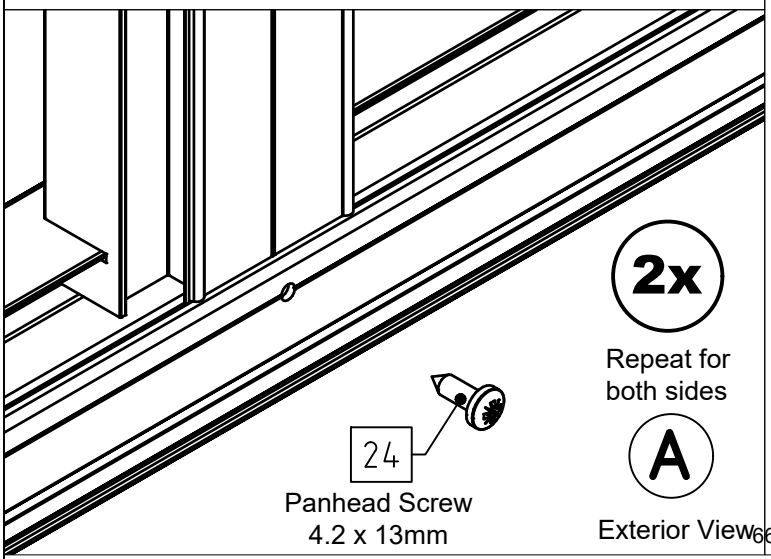


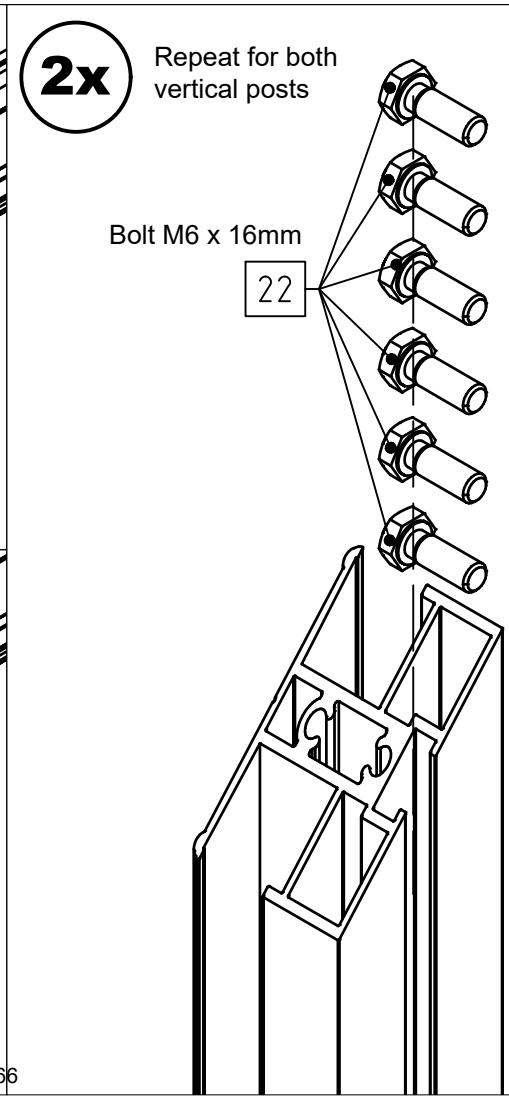





I
Interior View
7
Vertical Post - angle cut
(left from outside)
Vertical Post -
angle cut
(right from outside)
8

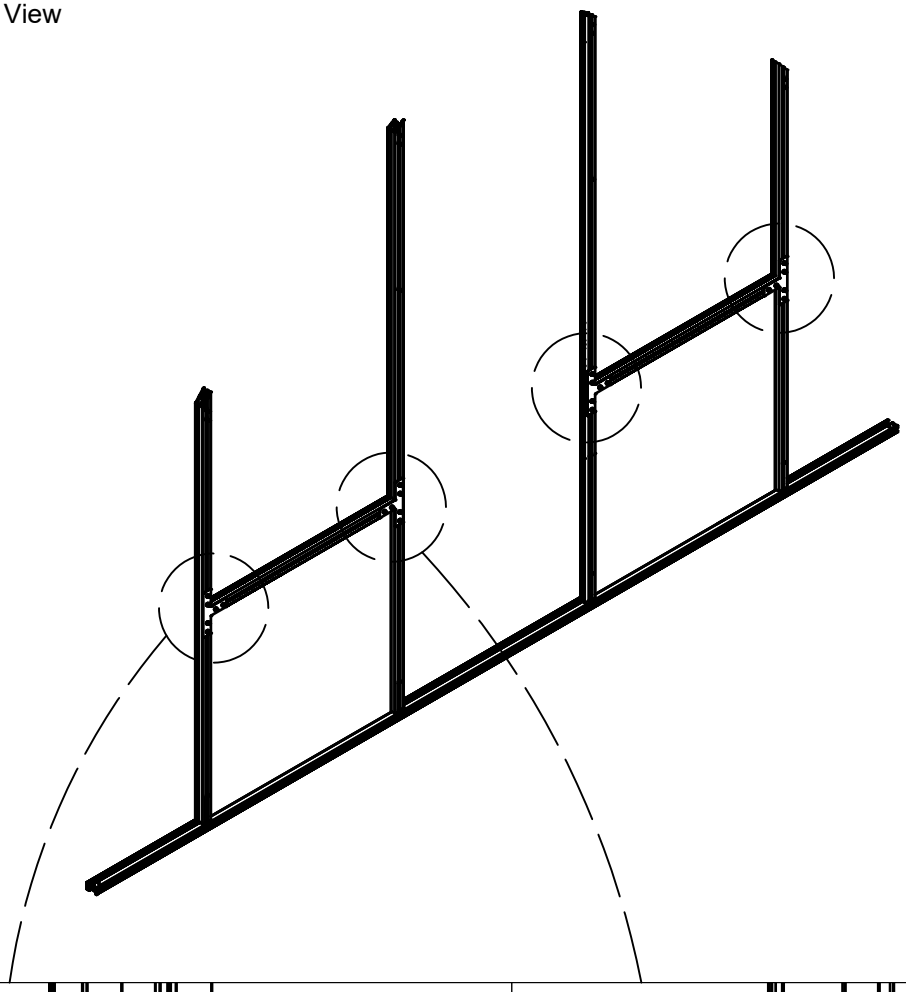

1
Exterior View
A
7/8
Vertical Post


2x
Repeat for
both sides
A
Exterior View
24
Panhead Screw
4.2 x 13mm


2x
Repeat for both
vertical posts
Bolt M6 x 16mm
22

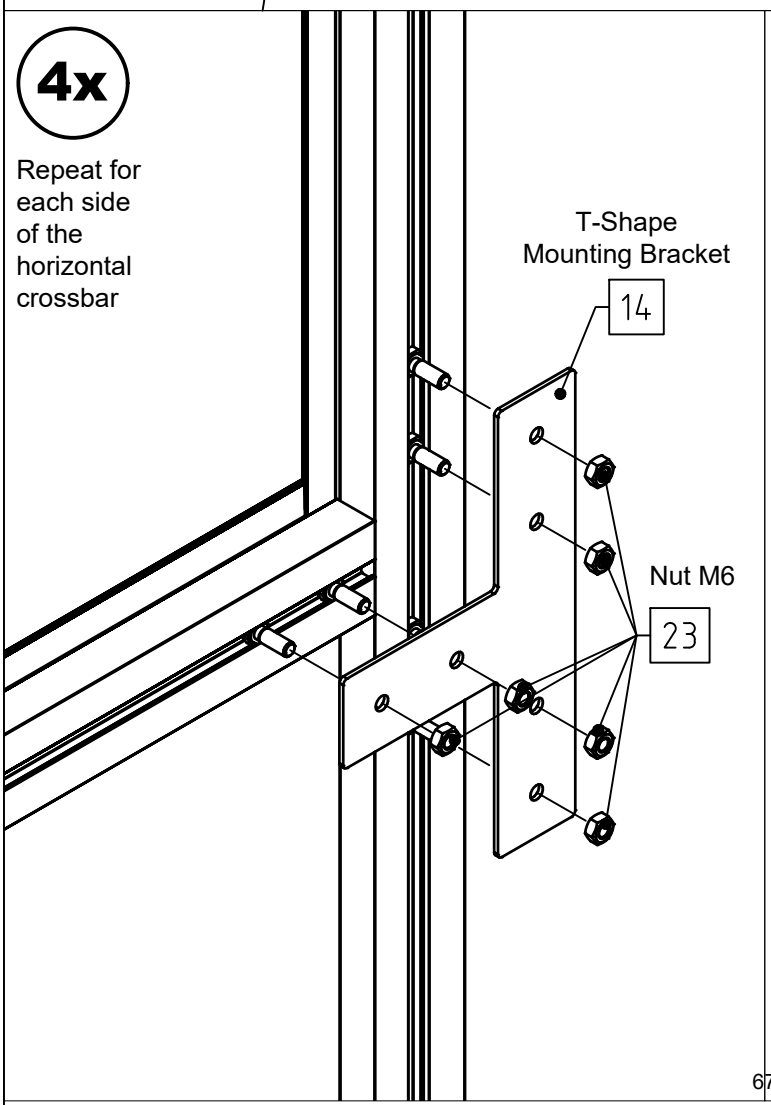
TG-C

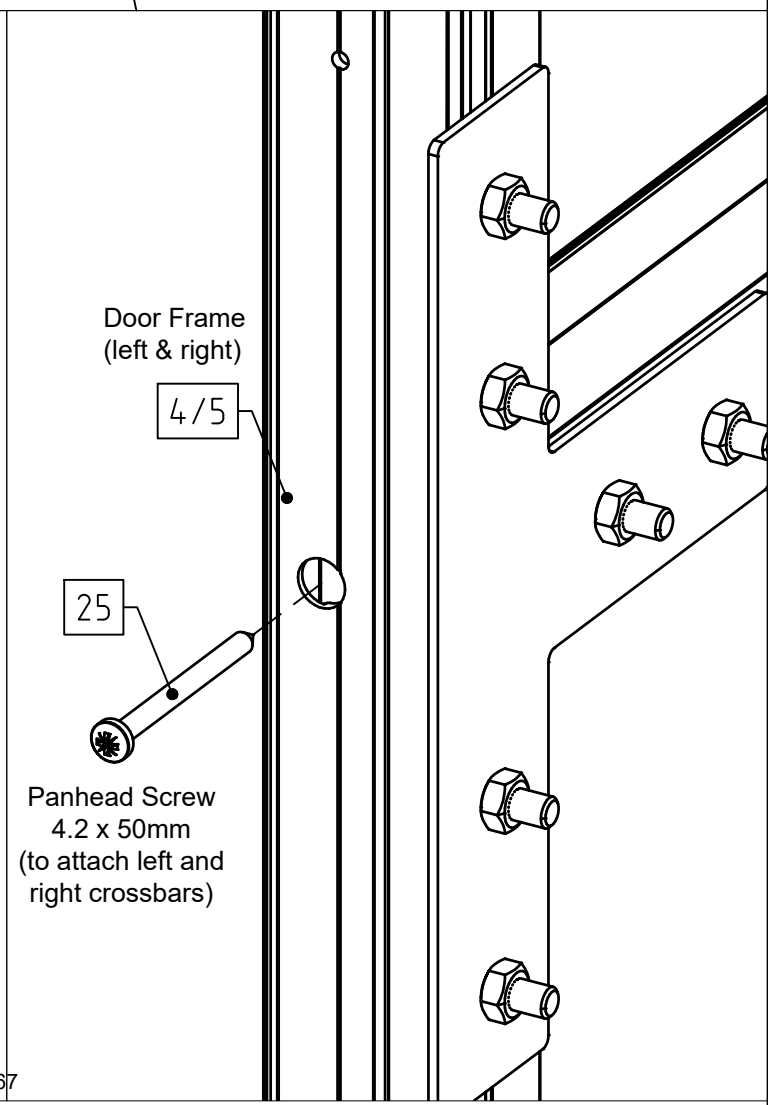
Interior View



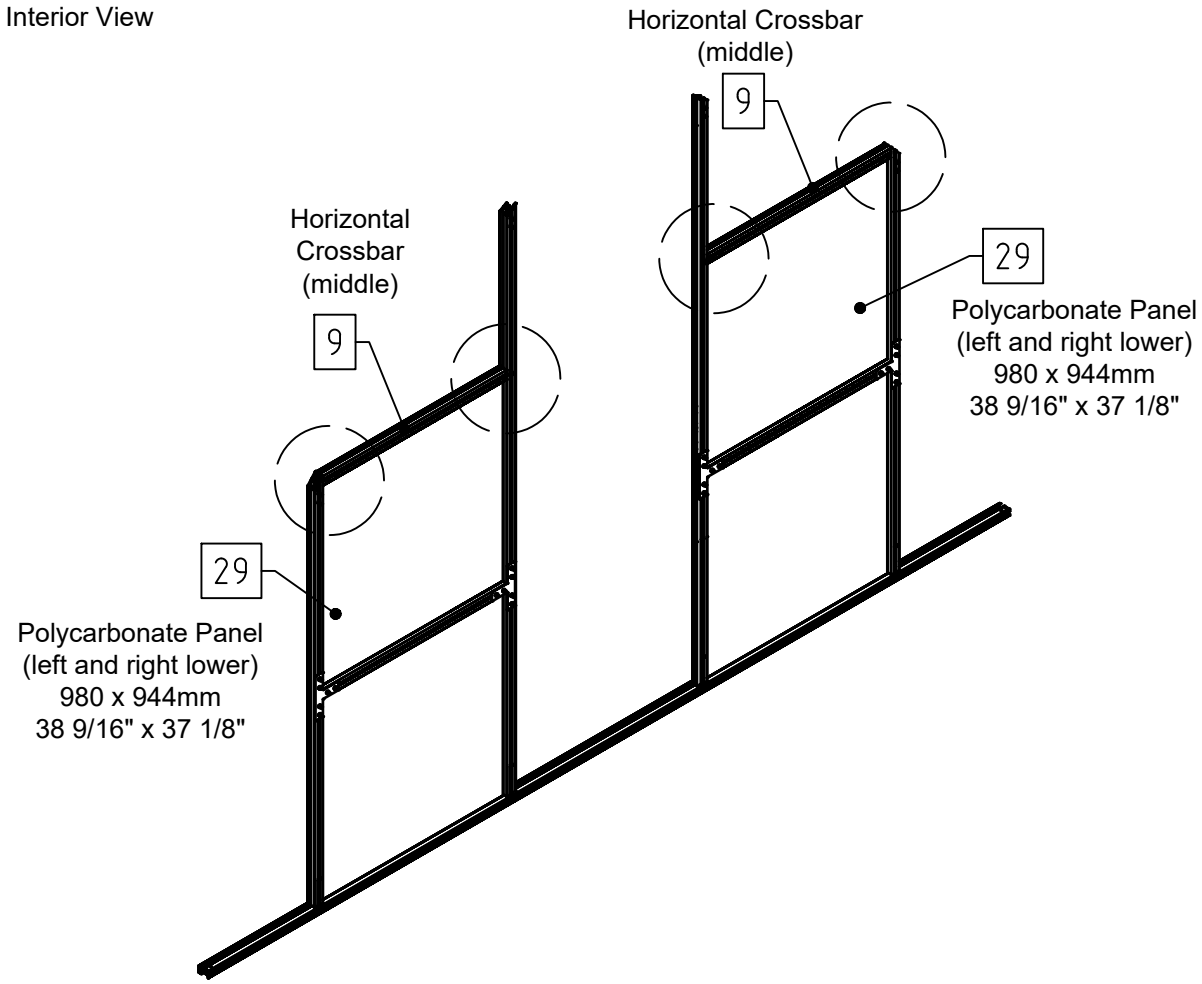
4x

Repeat for each side of the horizontal crossbar

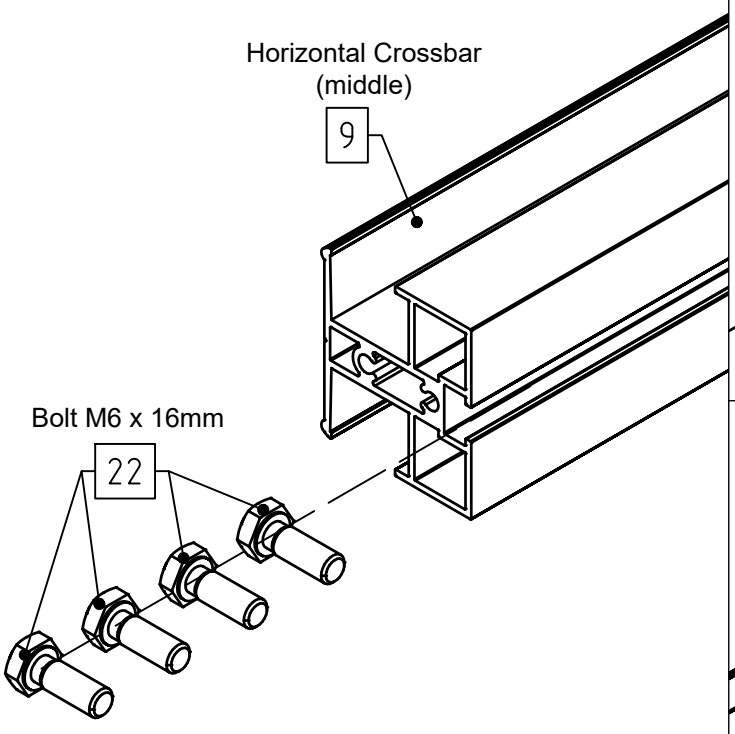


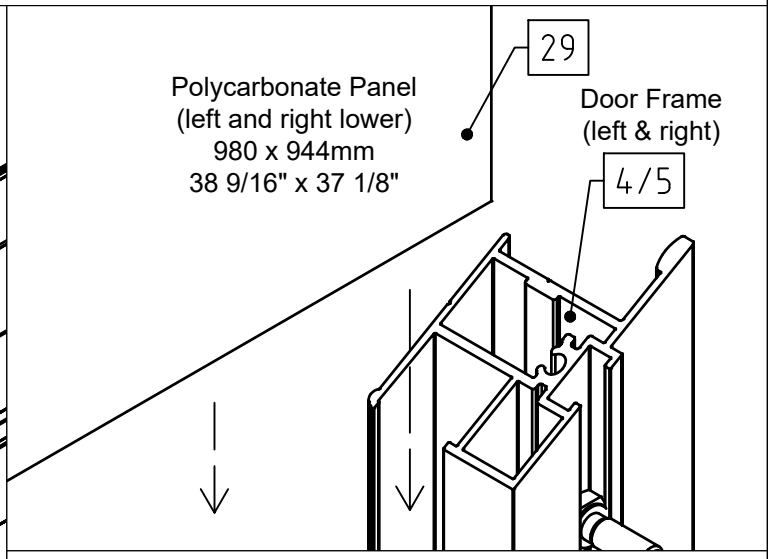


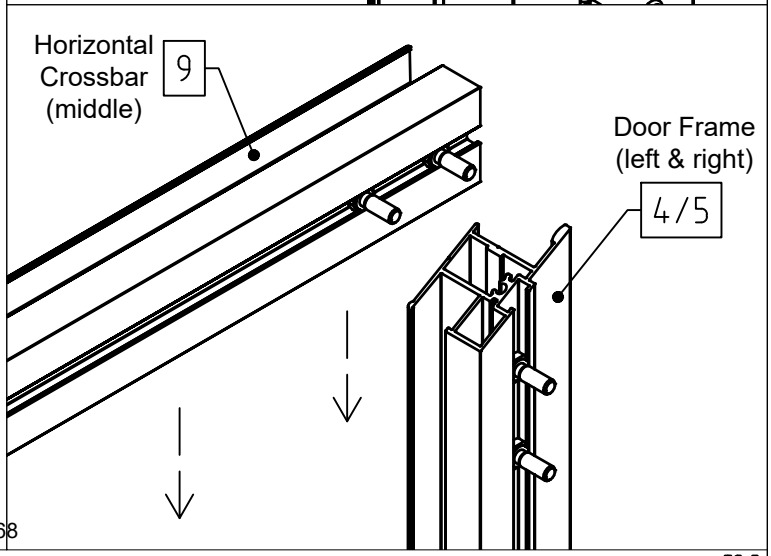
Interior View



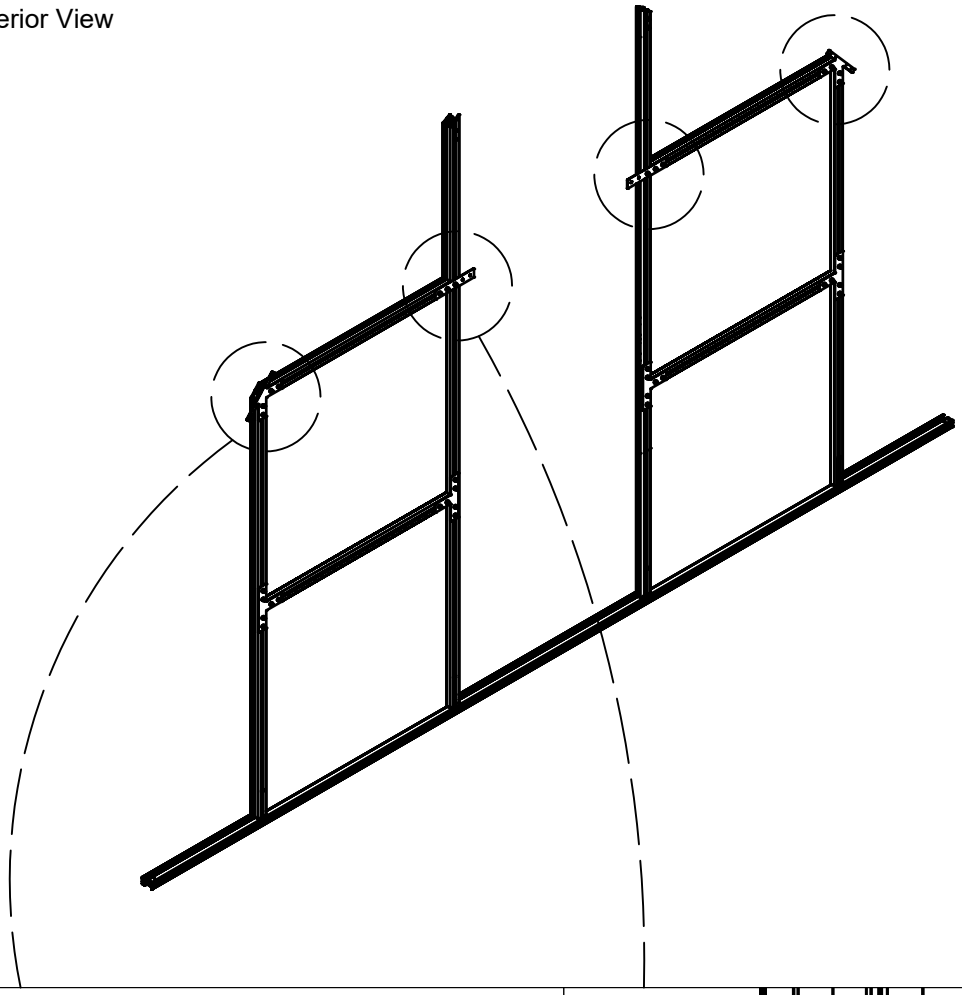
2x Repeat for both horizontal crossbars



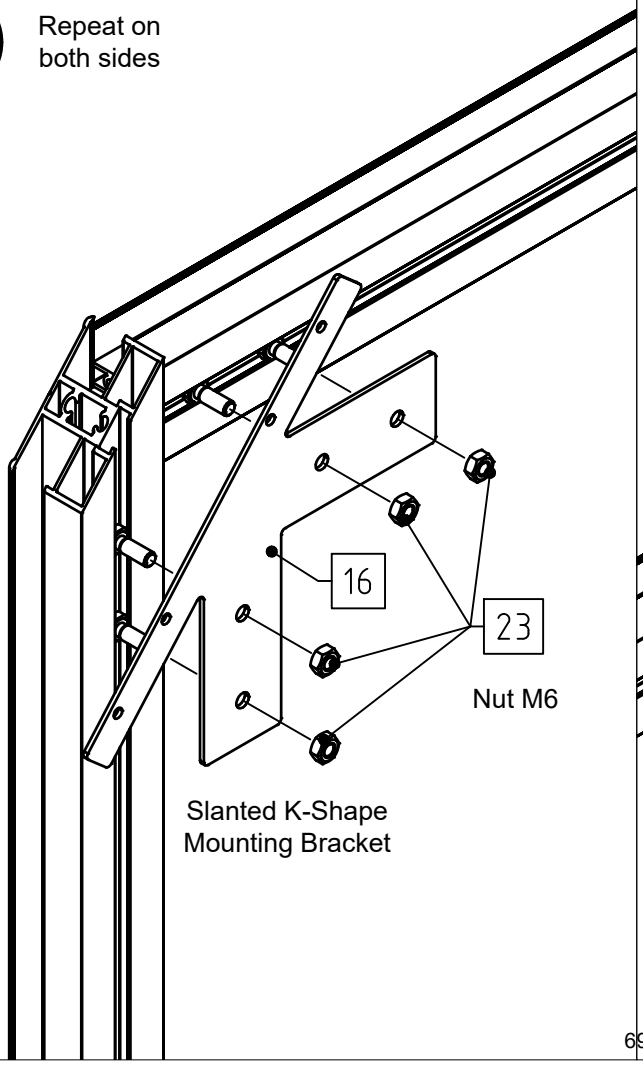




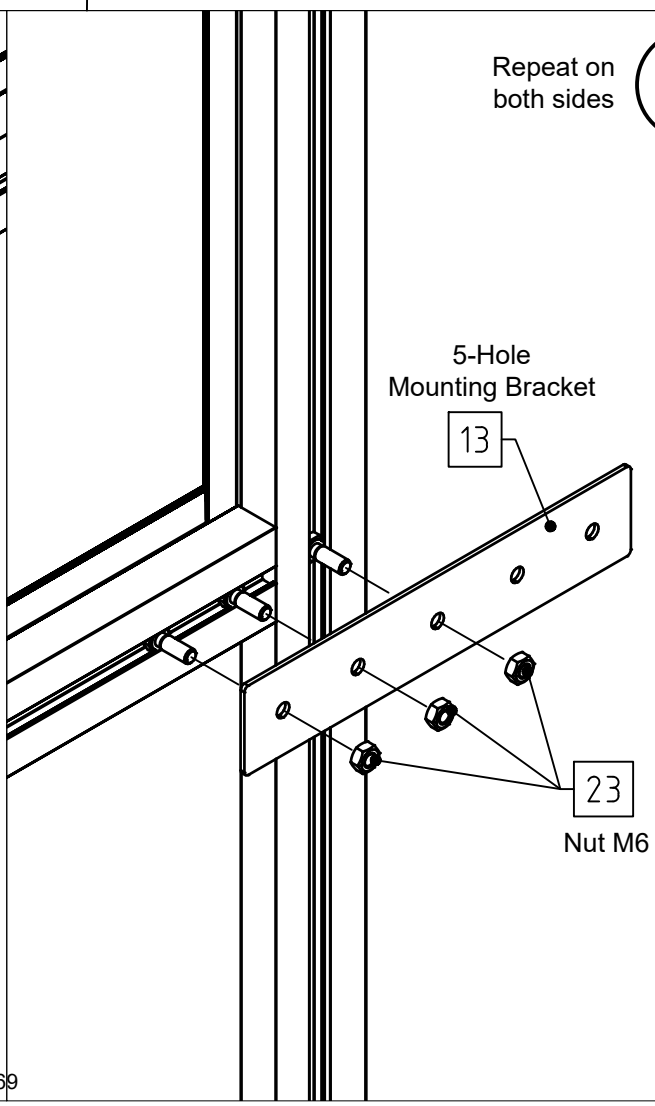
I Interior View



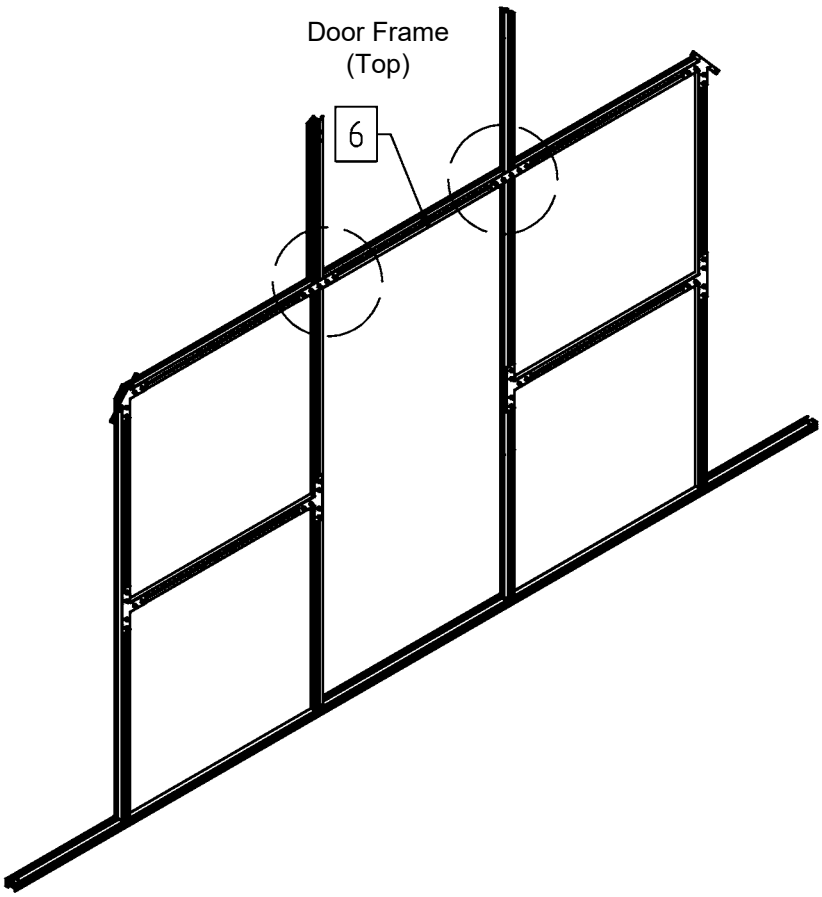
2x Repeat on both sides

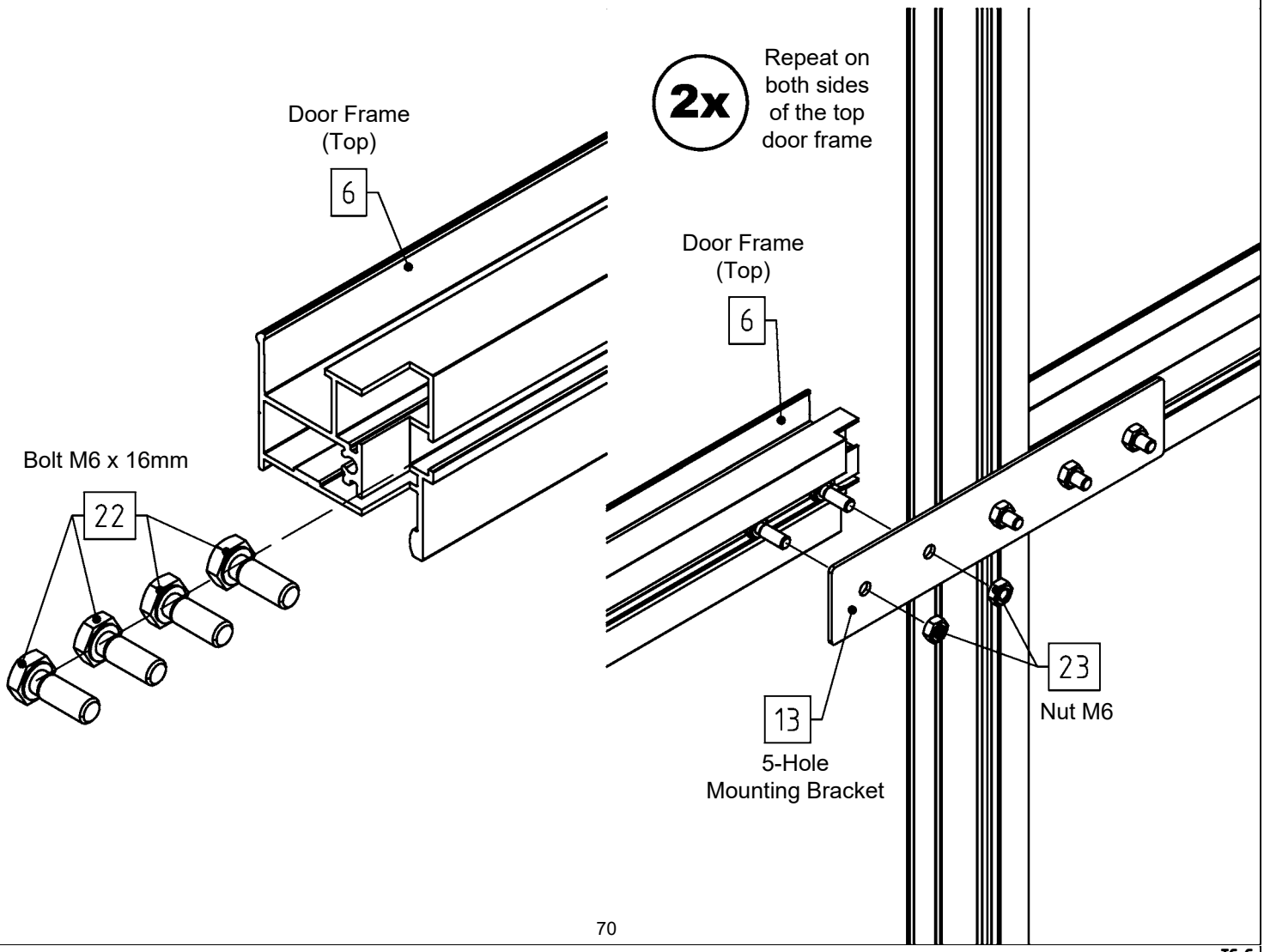


Repeat on both sides 2x

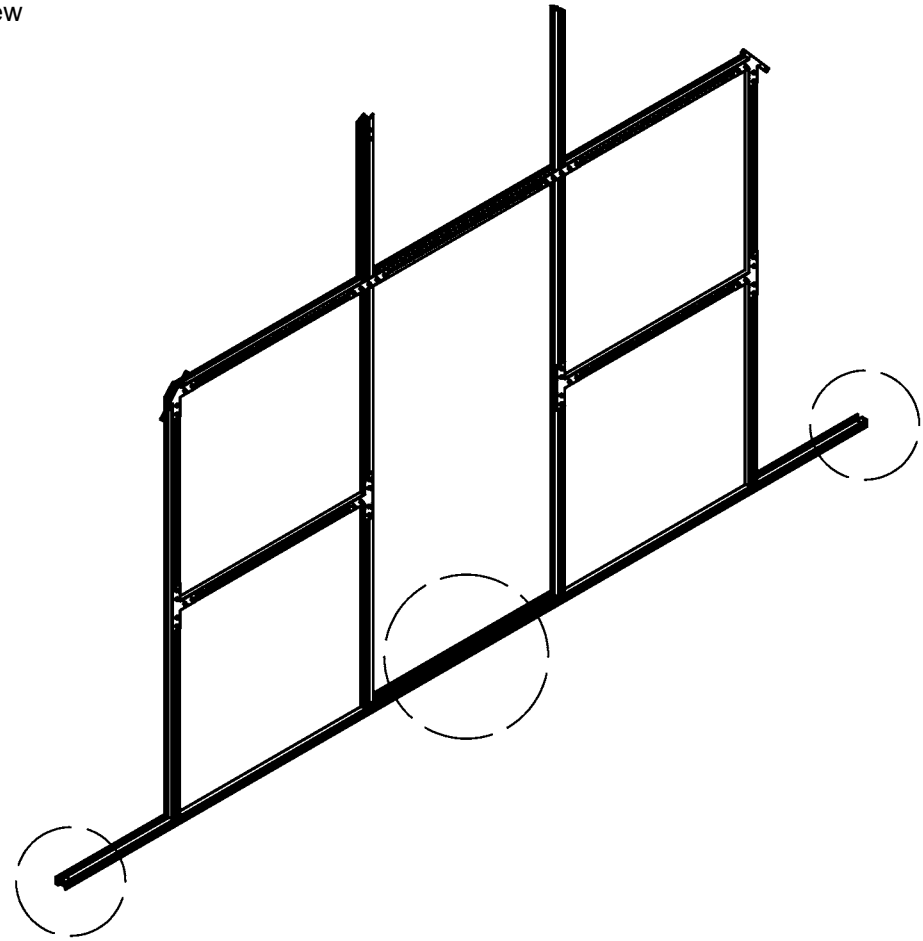


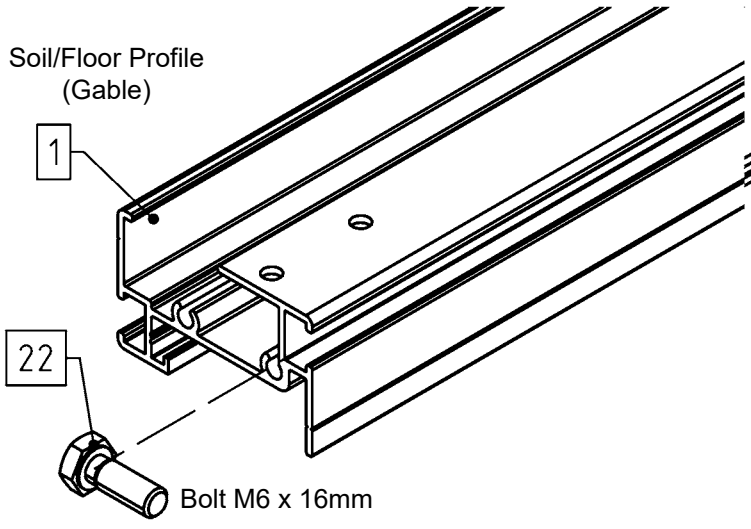
Interior View

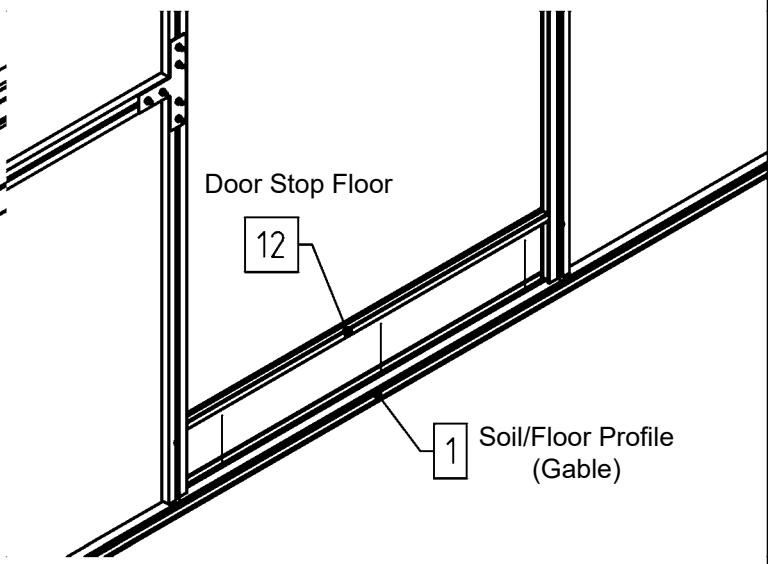


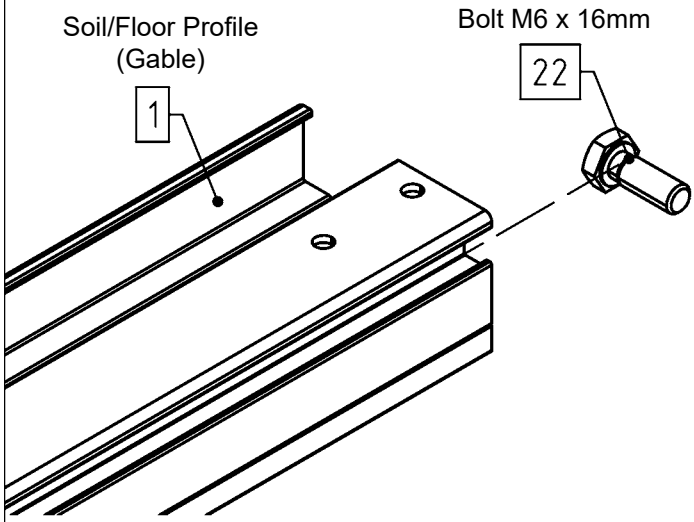


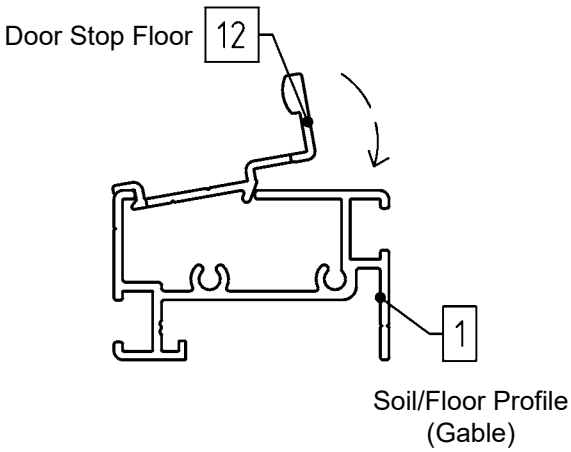
Interior View



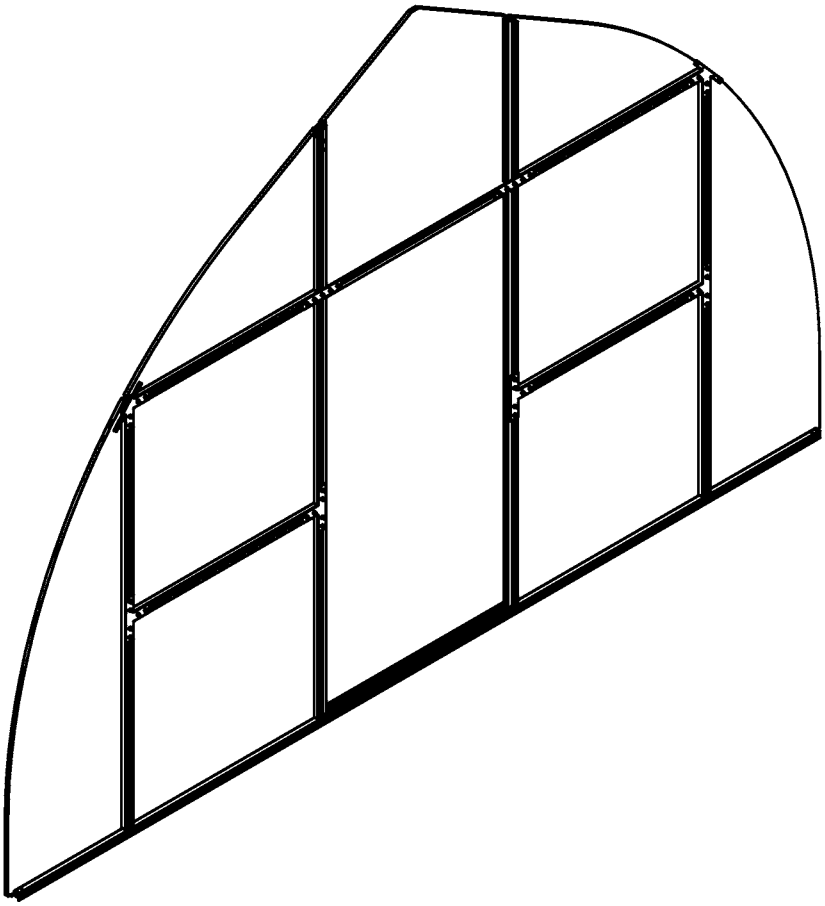


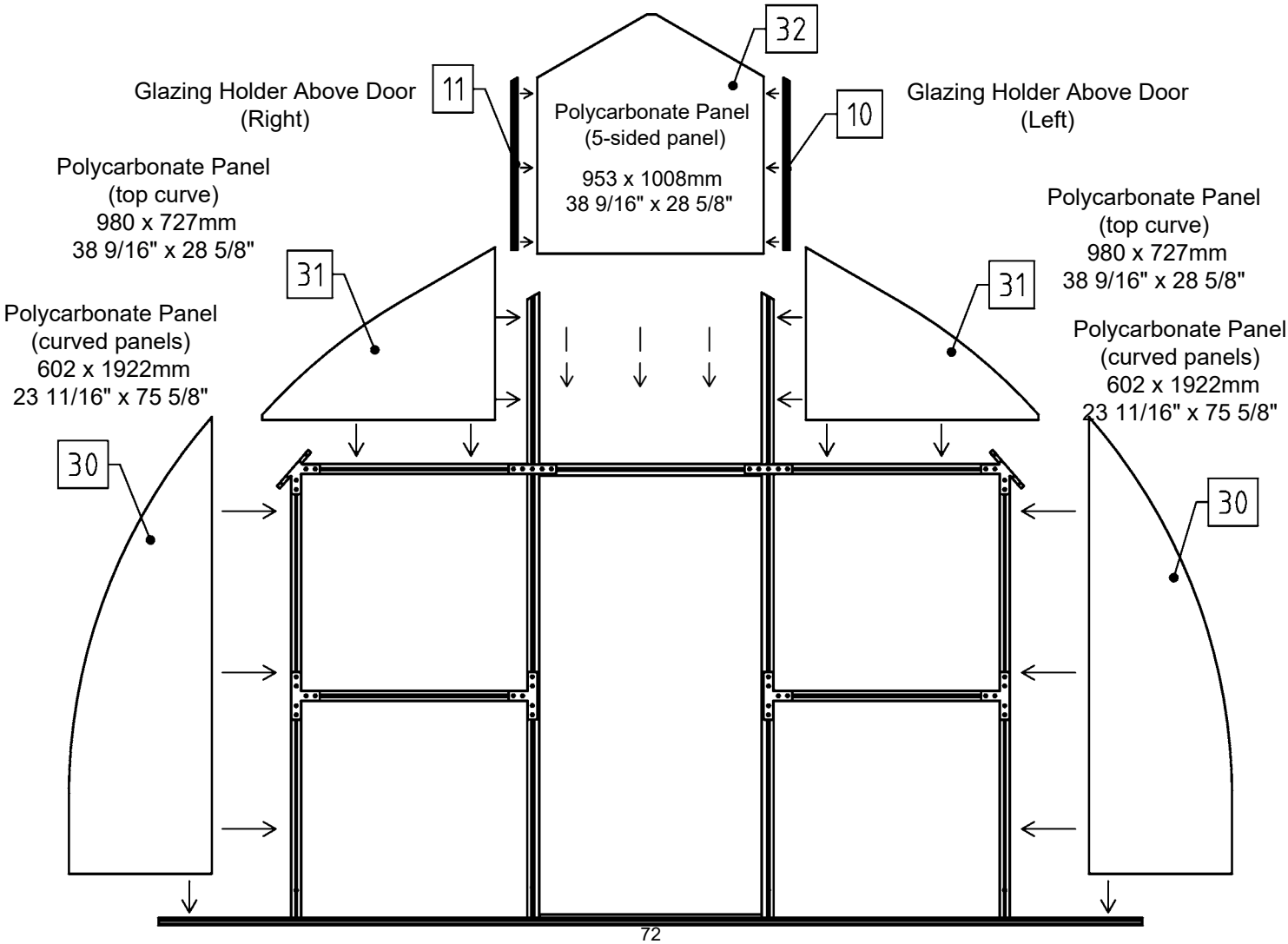




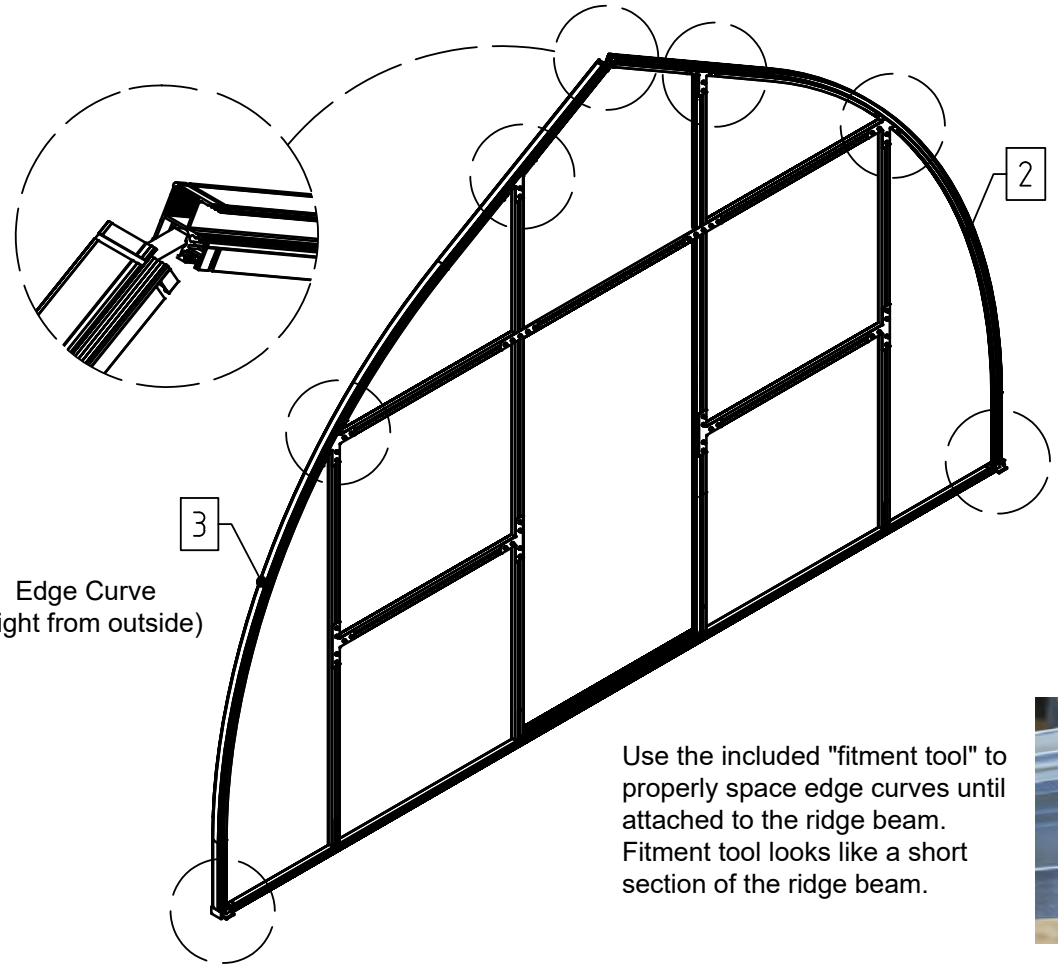


I Interior View

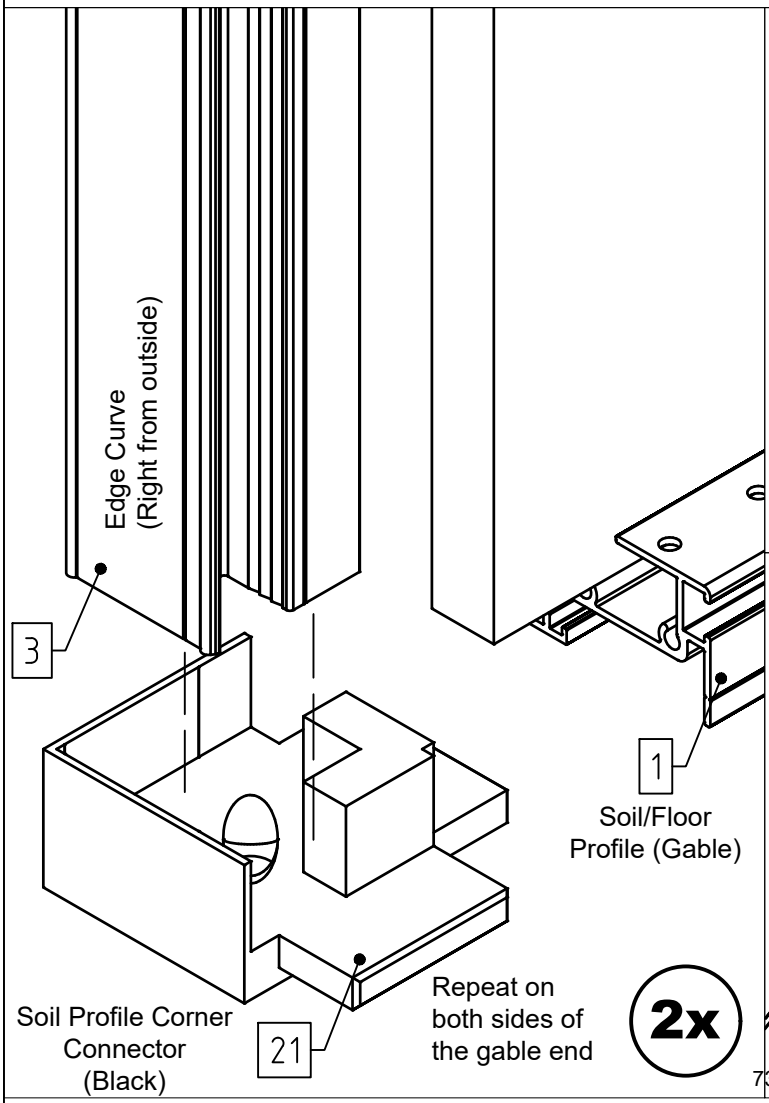


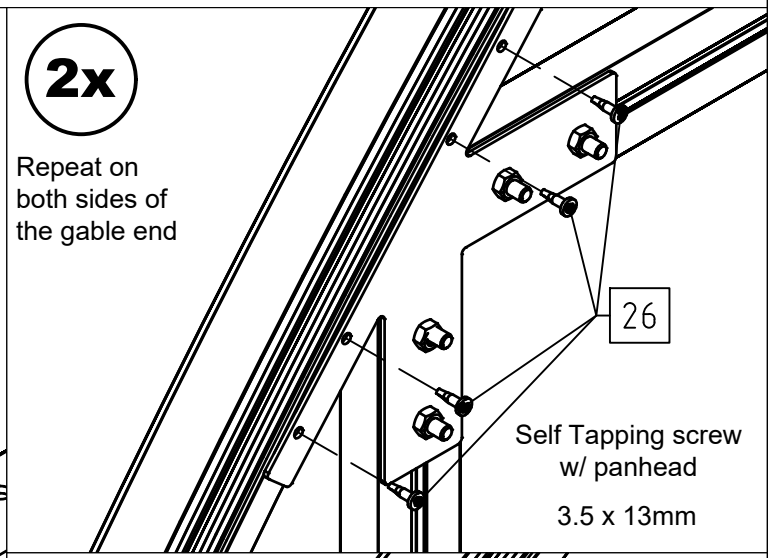


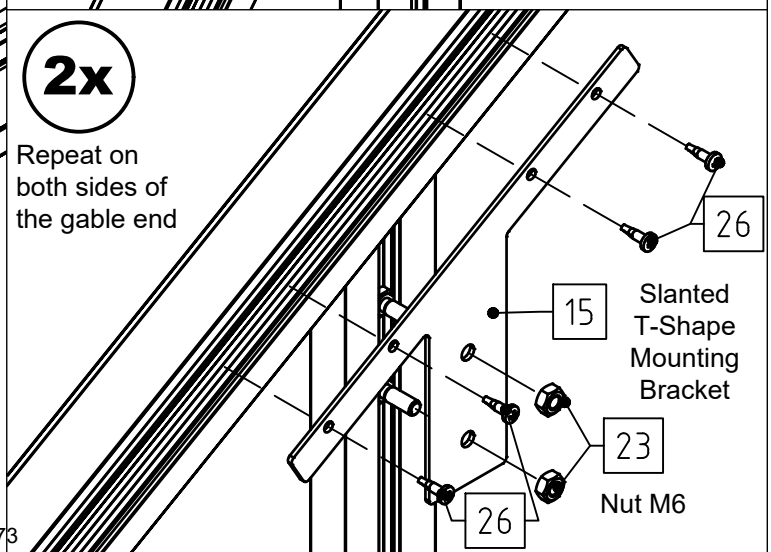
Interior View



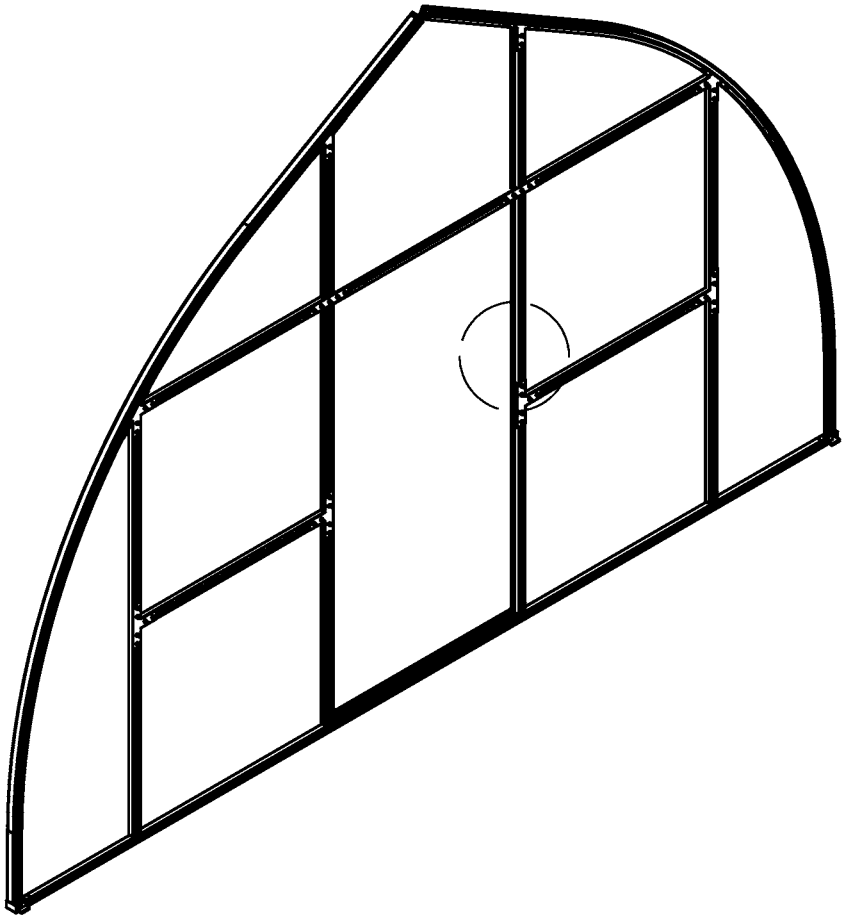
Use the included "fitment tool" to properly space edge curves until attached to the ridge beam. Fitment tool looks like a short section of the ridge beam.

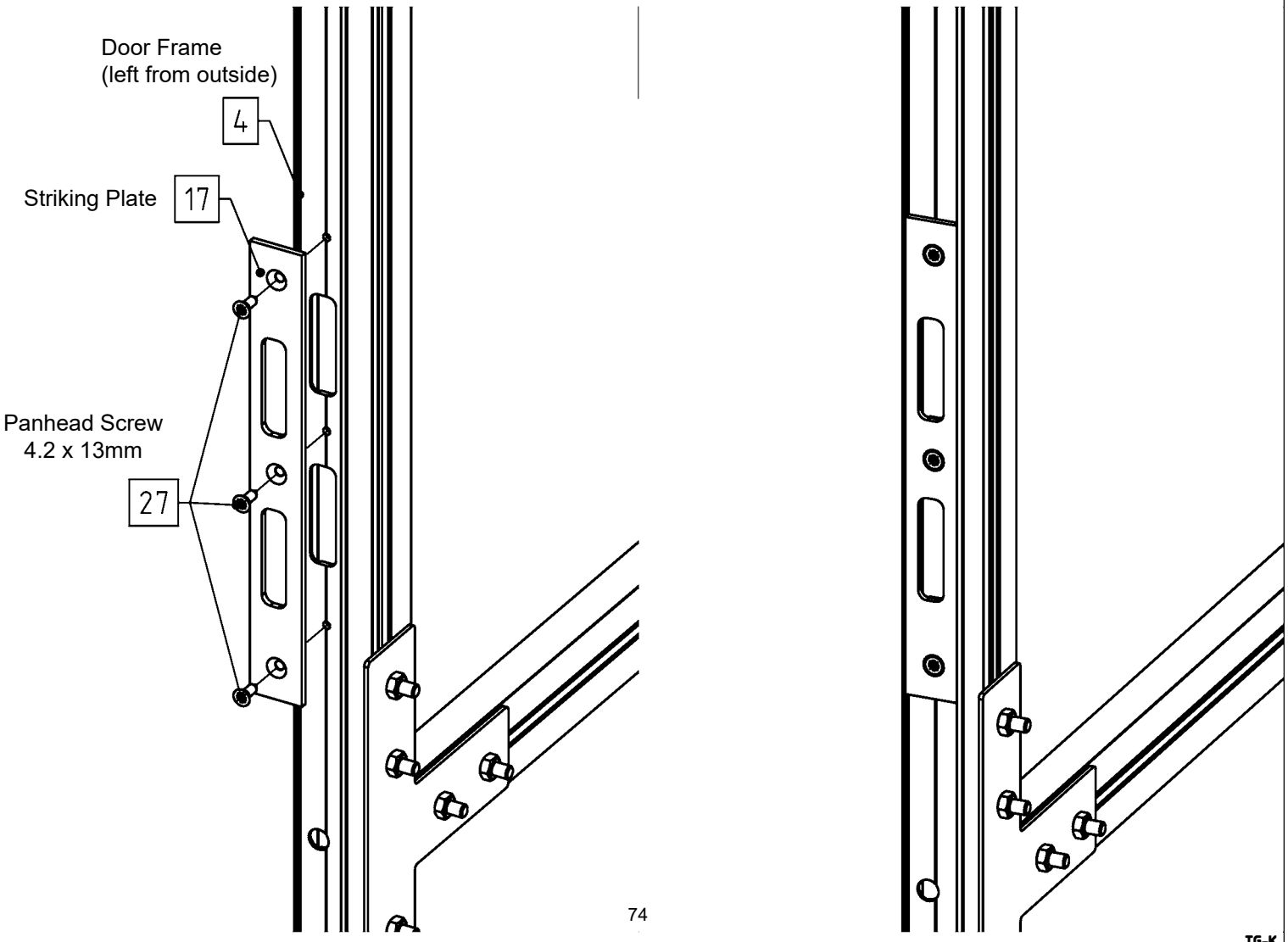






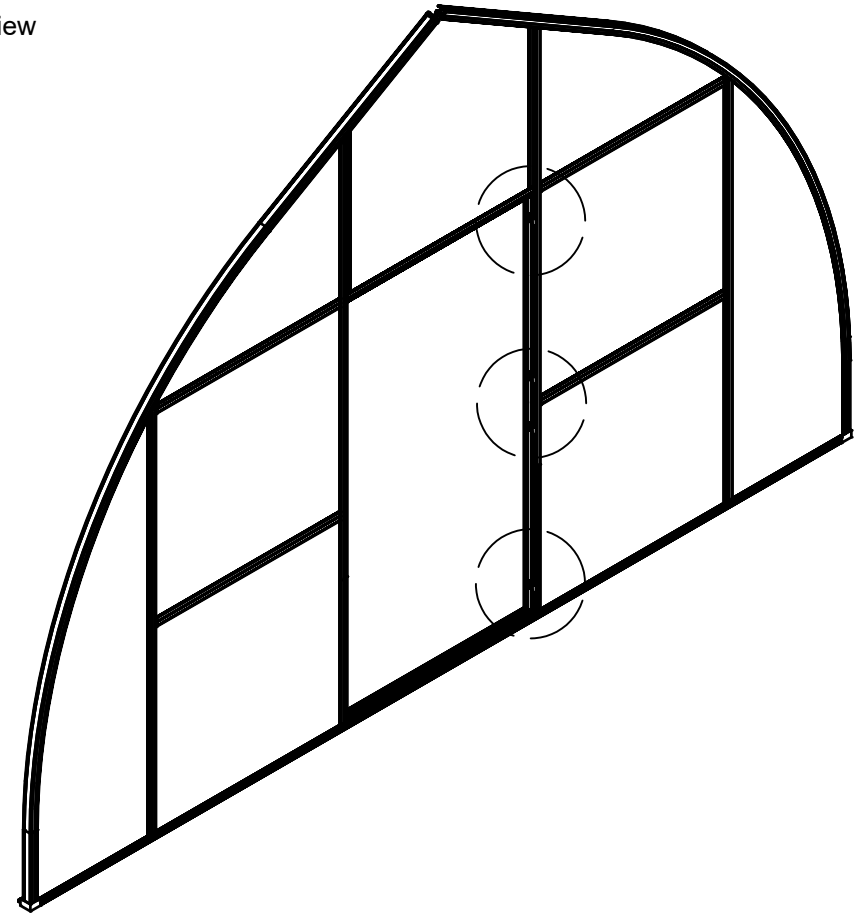
Interior View





TG-K

A Exterior View



4x Repeat for all (4) hinges

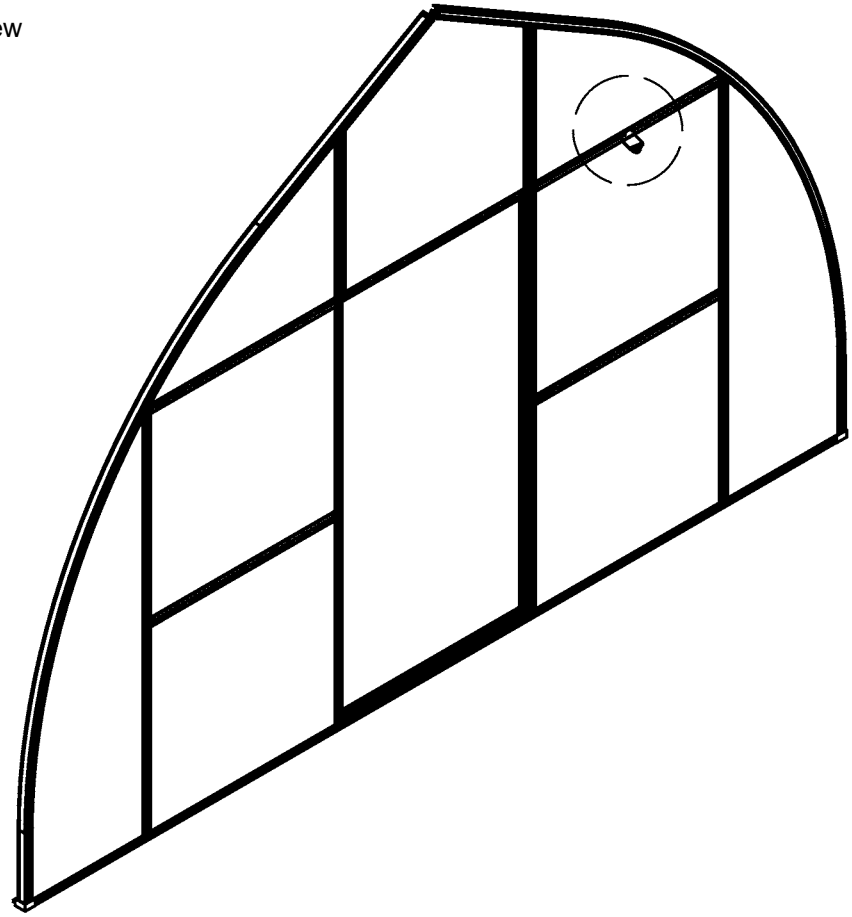
3 Edge Curve (Right from outside)

Hinge 18

24 Panhead Screw 4.2 x 13mm

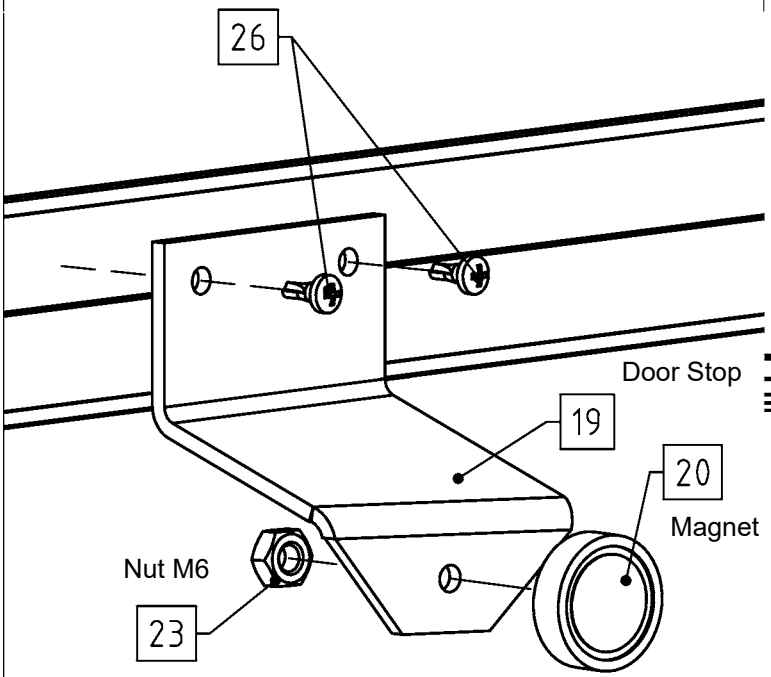
TG-L

A Exterior View

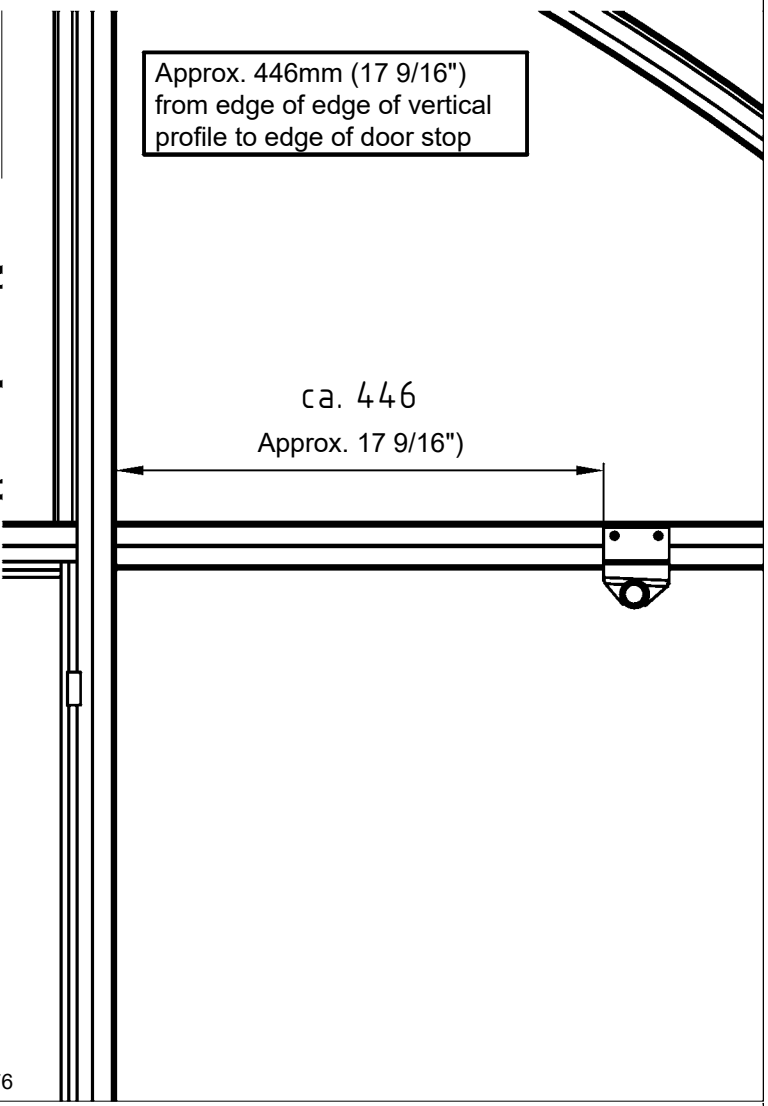


Self Tapping screw
w/ panhead

3.5 x 13mm



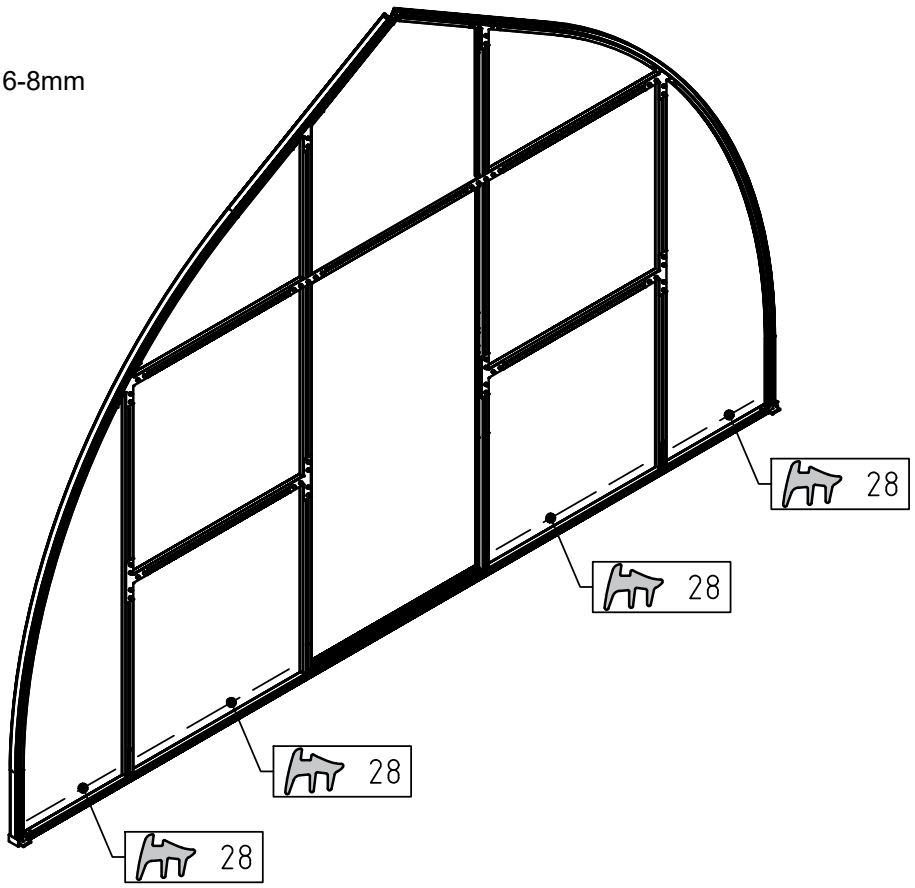
Approx. 446mm (17 9/16")
from edge of edge of vertical
profile to edge of door stop



Note: No drill hole available.
Use selft tapping screws

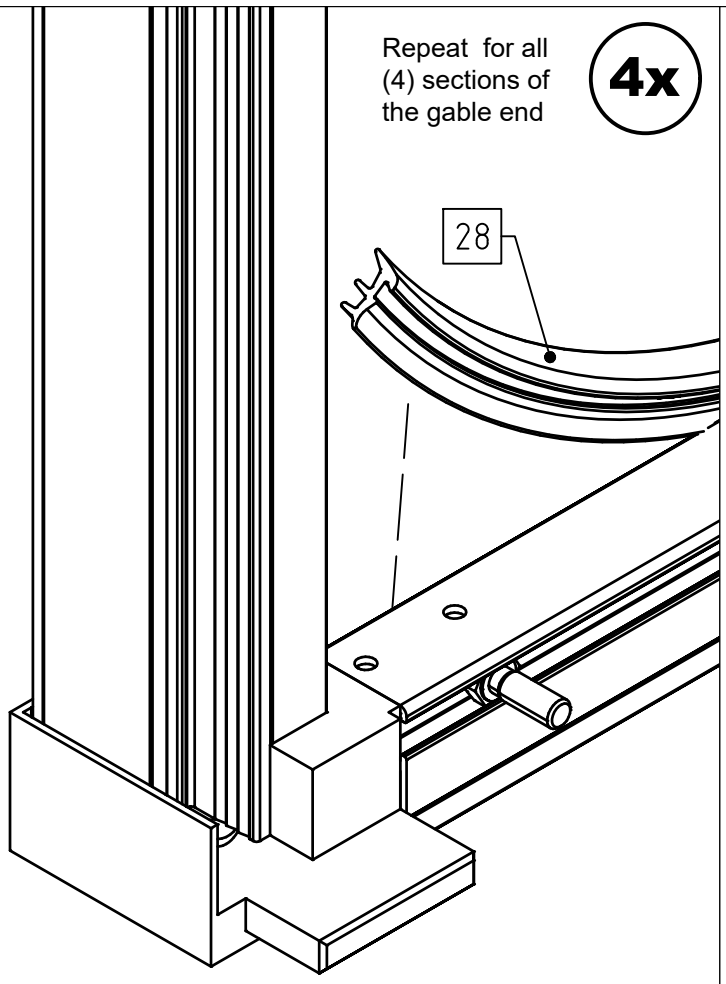
Exterior View

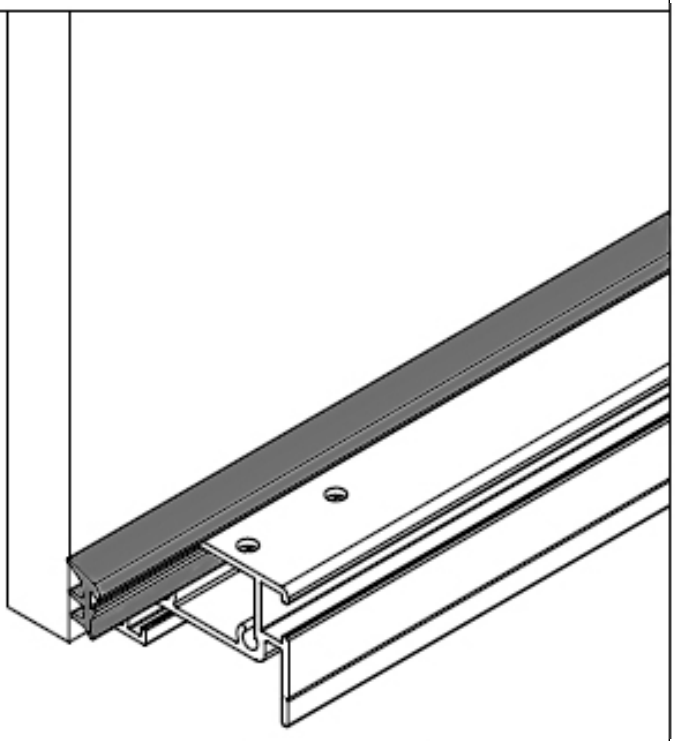
Wedge Gasket 6-8mm

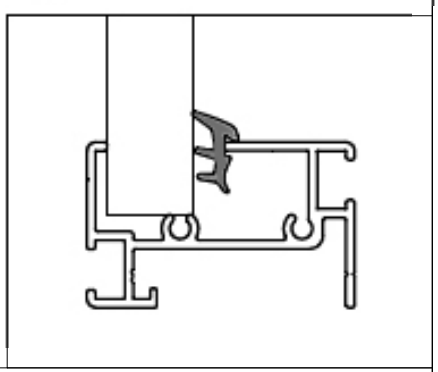


Repeat for all (4) sections of the gable end

4x







STOP! Important notes before beginning the assembly of the full greenhouse

It is not recommended to leave a greenhouse overnight that is not fully assembled or sufficiently anchored! Any opening in your greenhouse can catch wind gusts and pick up your greenhouse like a kite or parachute. If you must leave a partially assembled greenhouse, weigth it down with sandbags, concrete, anchors, tie downs or anything you can find to weigh it down. Cover any openings.

Do not begin assembling your sidewalls on a windy day. If there are storms forecast in the near future, do not begin assembly.

You will need to support the long ridge beam in some way - we recommend using 2x4s to build a couple supports (see photos near the beginning of the manual).

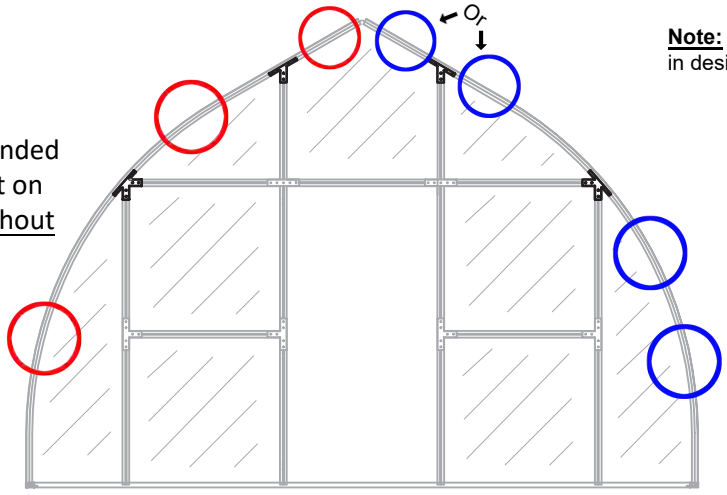
Three people are recommended for this portion of assembly. It can be done with less, but it will be more challenging. It will be helpful to have 2 rubber mallets and white lithium grease on hand to help slide the curved profiles along the soil profile and ridge beam as well as sliding the roof vents into position on the ridge beam.

It is recommended to look through the steps in this section and/or watch our animated assembly video to understand and be prepared for the assembly.

IMPORTANT! Take a moment to plan out the positioning of the following for your greenhouse:
Roof Vents - be clear how many roof vents your unit has and where you will be placing these. Note that they can be placed opposite each other, but not side by side.
Lateral Supports - these L shaped extrusions connect the gables and all curved extrusions. These are a structural component of the greenhouse, but also act as the back suppport for any shelves you may be adding to your greenhouse. Please see the diagram below to help you plan for the appropriate height positioning of your lateral supports. They can be shifted up/down later on, however it is easiest to start with them in the correct position**.**
Extra bracing for Riga XL 7, 8 and 9 have special curve profile bundles with a reinforcement bar due to their longer length. See the follwing two pages for assembly information and placement in these longer units.

Lateral Support Recommended Placement Height: Insert bolts into channel on edge curve to attach your lateral supports. Placement height may vary and will determine the height of your shelves if you have them. Red circles mark the lateral support location on the side with no shelves, blue marks the side with shelves. Shelves may be placed on either (or both!) sides of the greenhouse.

View from inside



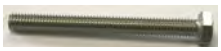
Note: Use tape to hold bolt in desired location.

Recommended placement on a side without shelves

Recommended placement on a side with shelves - you may go higher or lower for the bottom two supports depending on your shelf height preference.

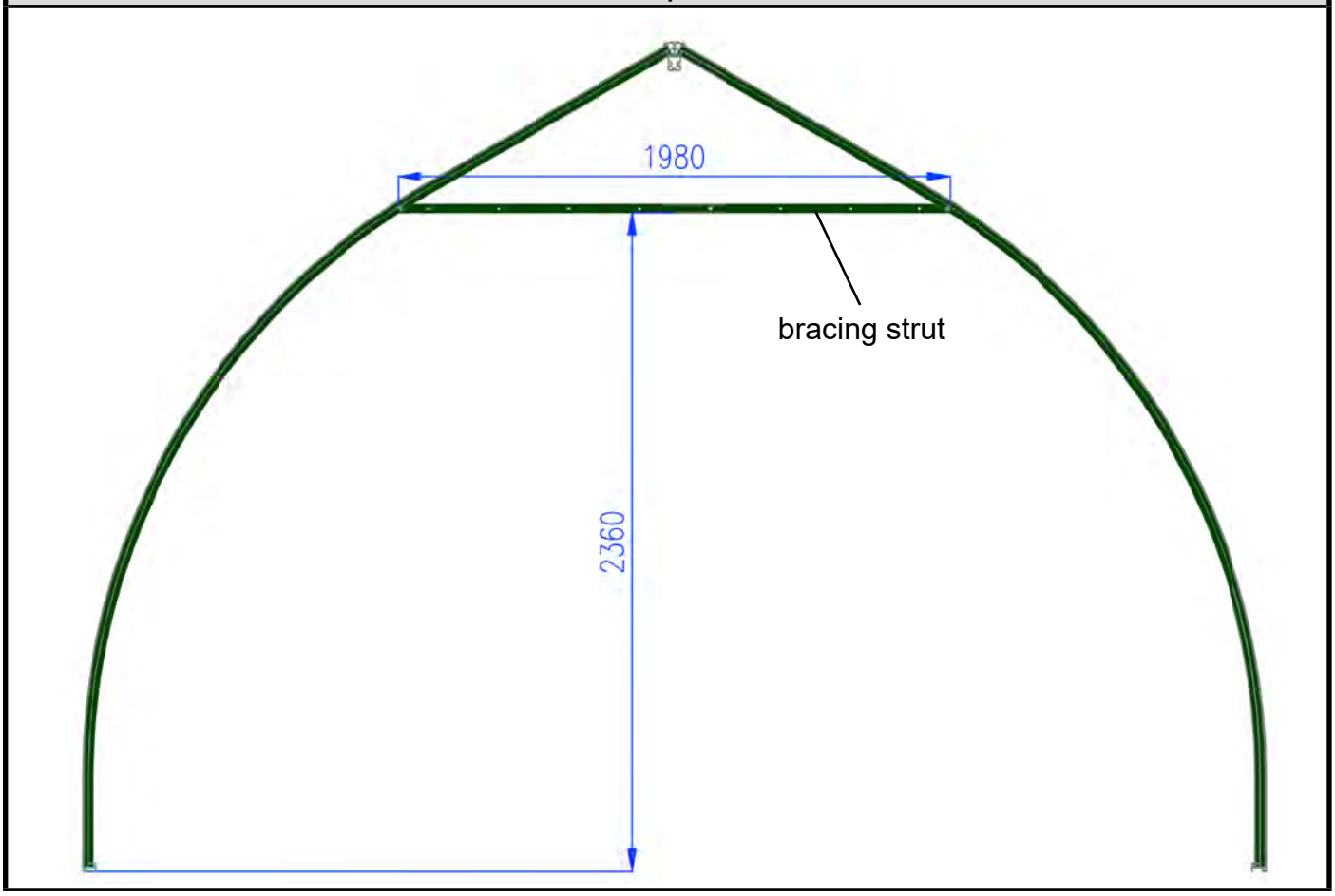
Extra Bracing for **Riga XL 7/8/9 ONLY** - bundled with the center curves

Assembly of the bracing

Pos.	Profile/part design	Description	Length [mm]	Quantity	Dimensions [mm]
		Bracing strut	1980	1 (XL7) 2 (XL8) 3 (XL9)	30x4
SM11		Hexagon **head bolt** M6 x 55**mm**		2 per bracing strut	
SM30		Nut M6		2 per bracing strut	

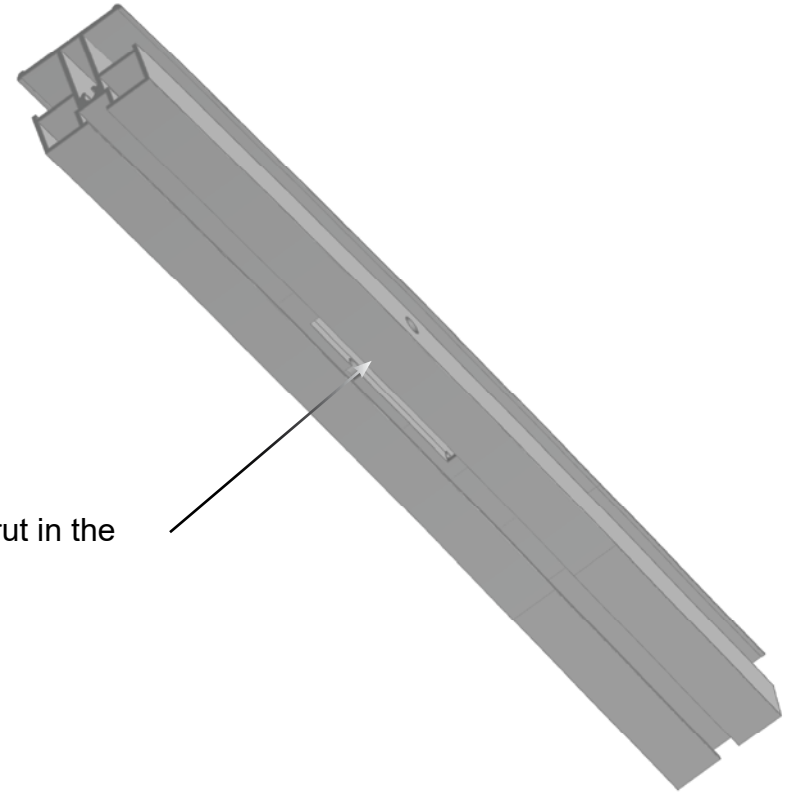
Remember during assembly! Place the pair of curves with the notches for the braces in the center of greenhouse. Then assemble as directed. Bracing struts and the corresponding curves should be near the middle. The XL7 comes with one strut, the XL 8 with 2, and the XL9 with 3.

Step 1



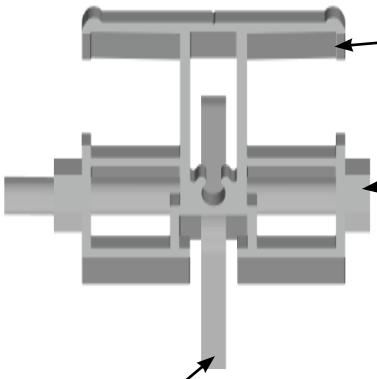
Extra Bracing for Riga XL 7/8/9 ONLY
Assembly of the bracing strut

Step 2



Slot for the bracing strut in the curved center profiles

Step 3

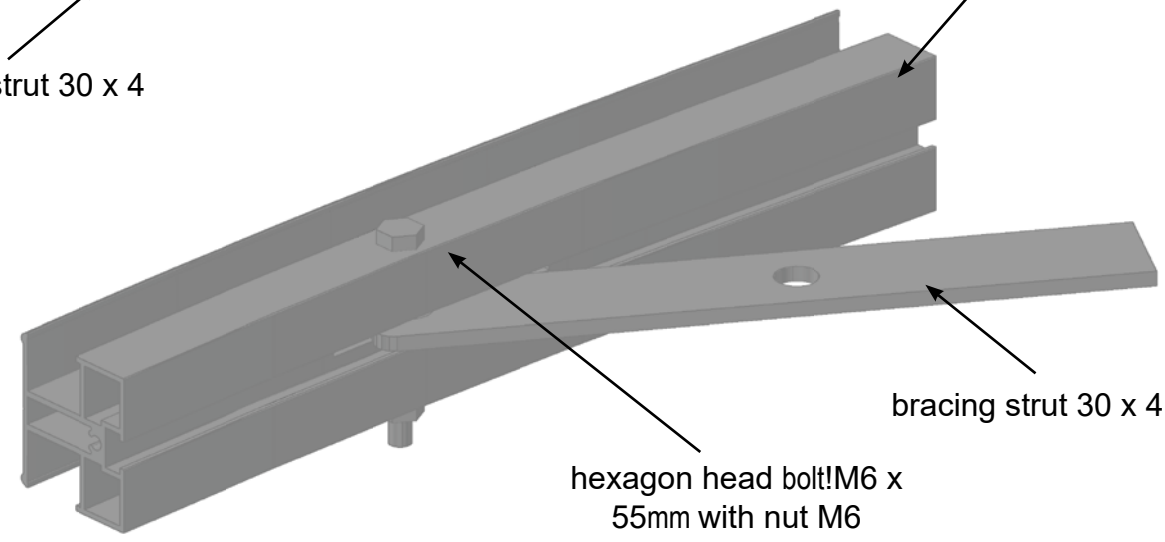


curved center profile

hexagon head bolt
M6 x 55 with nut M6

bracing strut 30 x 4

curved center profile

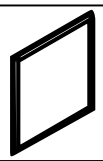
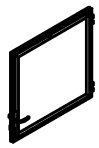
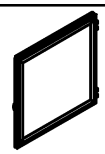
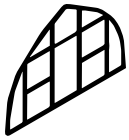
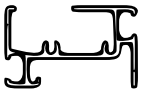
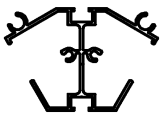
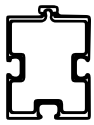
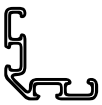
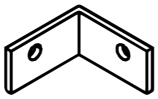


bracing strut 30 x 4

hexagon head bolt!M6 x
55mm with nut M6

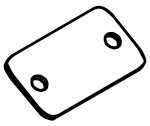
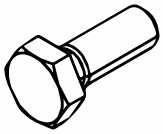
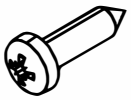
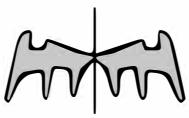
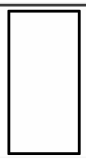
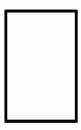
Side Wall Assembly

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1			Assembled Roof Window	**XL 5:** 4 **XL 6:** 4 **XL 7:** 6 **XL 8:** 6 **XL 9:** 8	
2			Assembled Top Door	2	
3			Assembled Lower Door	2	
4			Assembled Gable End	2	
5			Soil Profile	2	**XL 5:** 4909mm **(193 1/4")** **XL 6:** 5903mm **(232 7/16")** **XL 7:** 6898mm **(271 9/16")** **XL 8:** 7893mm **(310 3/4")** **XL 9:** 8888mm **(349 15/16")**
6			Ridge Beam Profile	1	**XL 5:** 4909 mm **(193 1/4")** **XL 6:** 5903 mm **(232 7/16")** **XL 7:** 6898 mm **(271 9/16")** **XL 8:** 7893 mm **(310 3/4")** **XL 9:** 8888 mm **(349 15/16")**
7			Ridge Beam Reinforcement Profile	1	**XL 5:** 4966mm **(195 1/2")** **XL 6:** 5960mm **(234 5/8")** **XL 7:** 6951mm **(273 11/16")** **XL 8:** 7944mm **(312 3/4")** **XL 9:** 8940mm **(351 15/16")**
8			Curved Profile	**XL 5:** 8 **XL 6:** 10 **XL 7:** 12 **XL 8:** 14 **XL 9:** 16	3869mm **152 5/16"**
9			Crossbar for Roof Vents	**XL 5:** 4 **XL 6:** 4 **XL 7:** 6 **XL 8:** 6 **XL 9:** 8	952mm **37 1/2"**
10			Lateral Supports	6	**XL 5:** 4965mm **(195 1/2")** **XL 6:** 5960mm **(234 5/8")** **XL 7:** 6955mm **(273 13/16")** **XL 8:** 7949mm **(312 15/16")** **XL 9:** 8944mm **(351 15/16")**
11		9999000199	Corner Mounting Plate	4	
12		9999000386	Floor Profile Connectors	4	

Side Wall Assembly

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000252	Ridge Beam Endcap	2	
14		9999000031	Connector Plate	**XL 5:** 8 **XL 6:** 8 **XL 7:**12 **XL 8:** 12 **XL 9:** 16	
15		25505700	Automatic Roof Window Opener	**XL 5:** 4 **XL 6:** 4 **XL 7:** 6 **XL 8:** 6 **XL 9:** 8	
16		9999000520	Hinge Bolts	8	
17		9999000183	M6 x 16 Bolt	Quantity varies by size	DIN 933
18		9999000128	M6 Nut	Quantity varies by size	DIN 934
19		9999000173	Washer	Quantity varies by size	DIN 9021
20		9999000144	Pan Head Screw 4.2 x 13	4	DIN 7981
21		9999000149	Pan Head Screw 4.8 x 16	16	DIN 7981
22		9999000120	Wedge Seal 6-8mm	Quantity varies by size	Double Roll Pull Apart
23			Full Polycarbonate Panel 980x3898mm 38 9/16" x 153 1/2"	**XL 5:** 6 **XL 6:** 8 **XL 7:**8 **XL 8:** 10 **XL 9:** 10	
24			Under Roof Vent Polycarbonate Panel 980x2833mm 38 9/16" x 111 1/2"	**XL 5:** 4 **XL 6:** 4 **XL 7:**6 **XL 8:** 6 **XL 9:** 8	

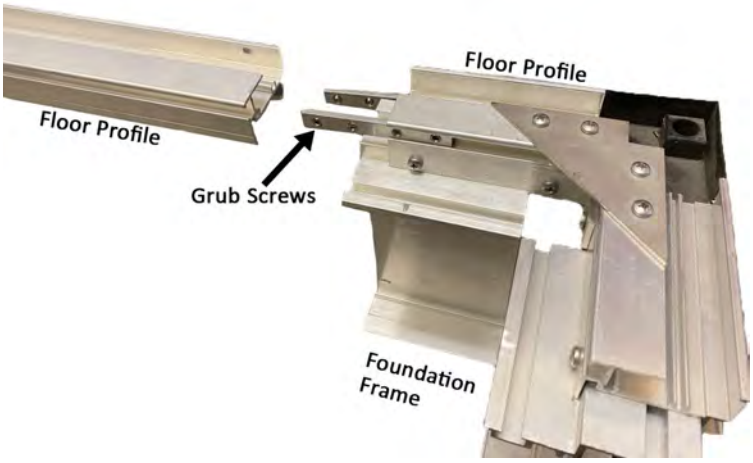
Side Wall Assembly

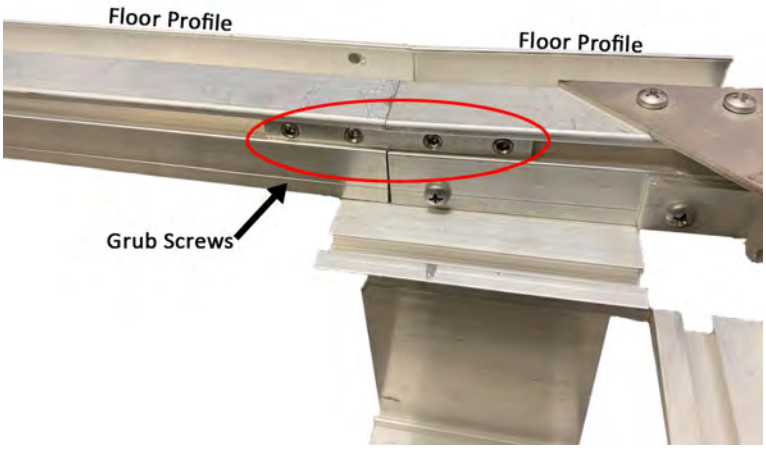
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
25		9999002979	Flat Seal for Roof Window	Quantity varies by size	

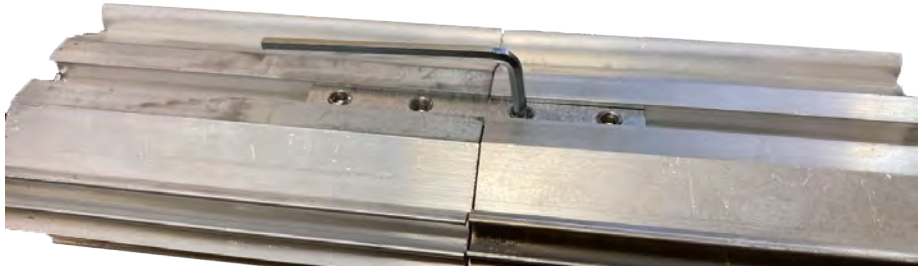
Connecting Long Profiles

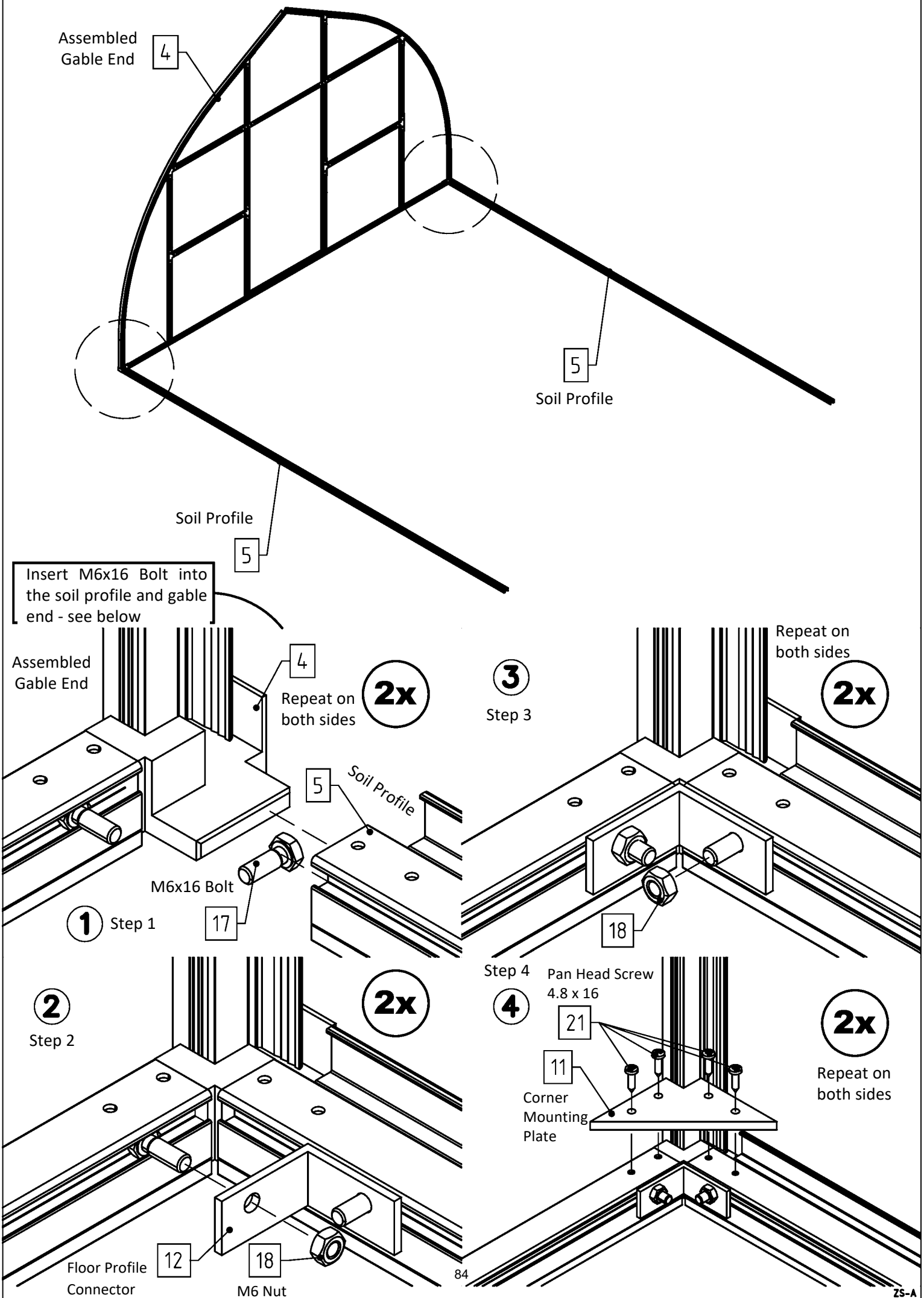
Note:Your long aluminum extrusions may come in sections that need to be connected before assembly. Please see examples below. The Grub Screws are already in the channels, you will need to loosen them and slide them in place.





Connecting the Ridge Beam with Grub Screws

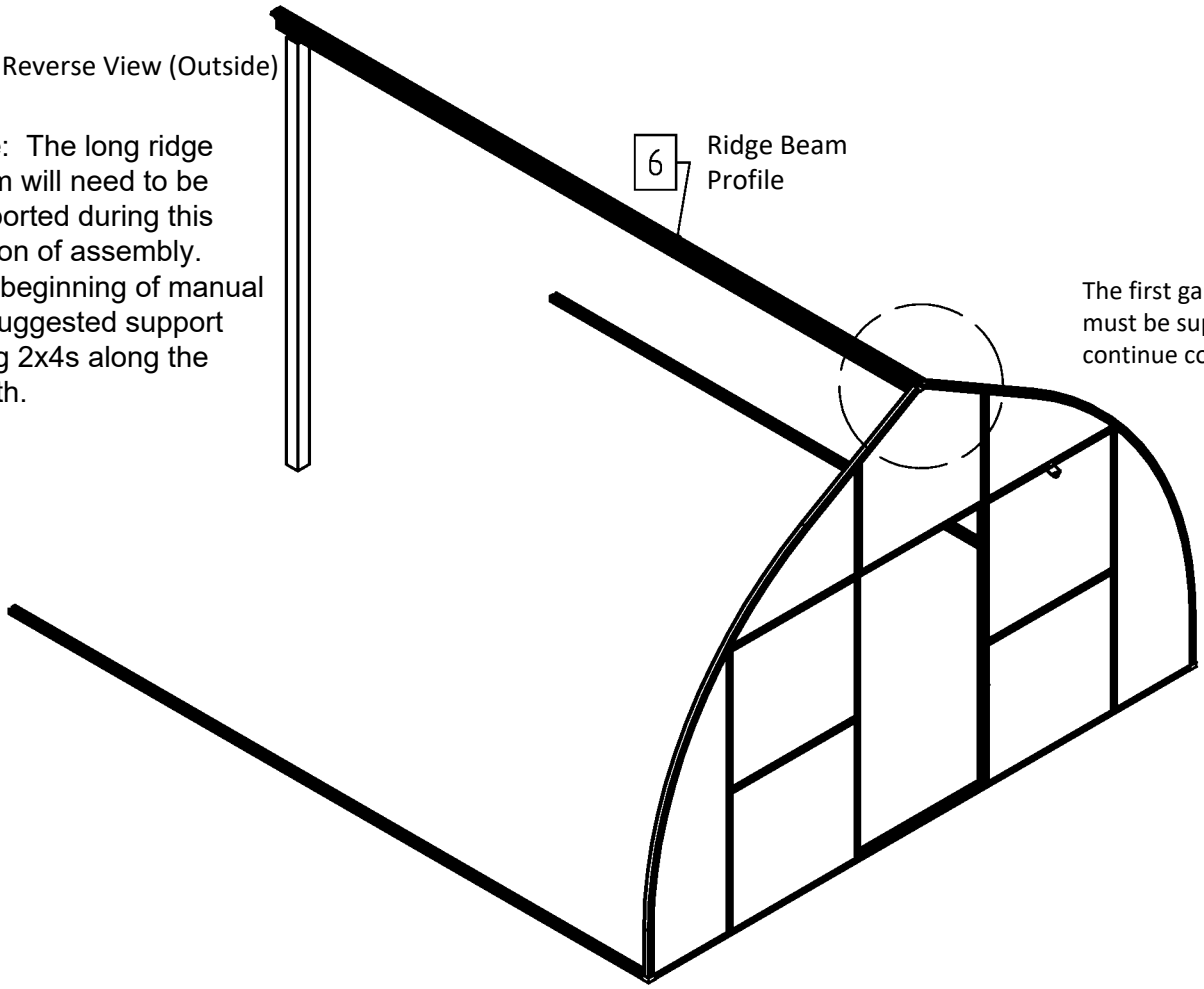


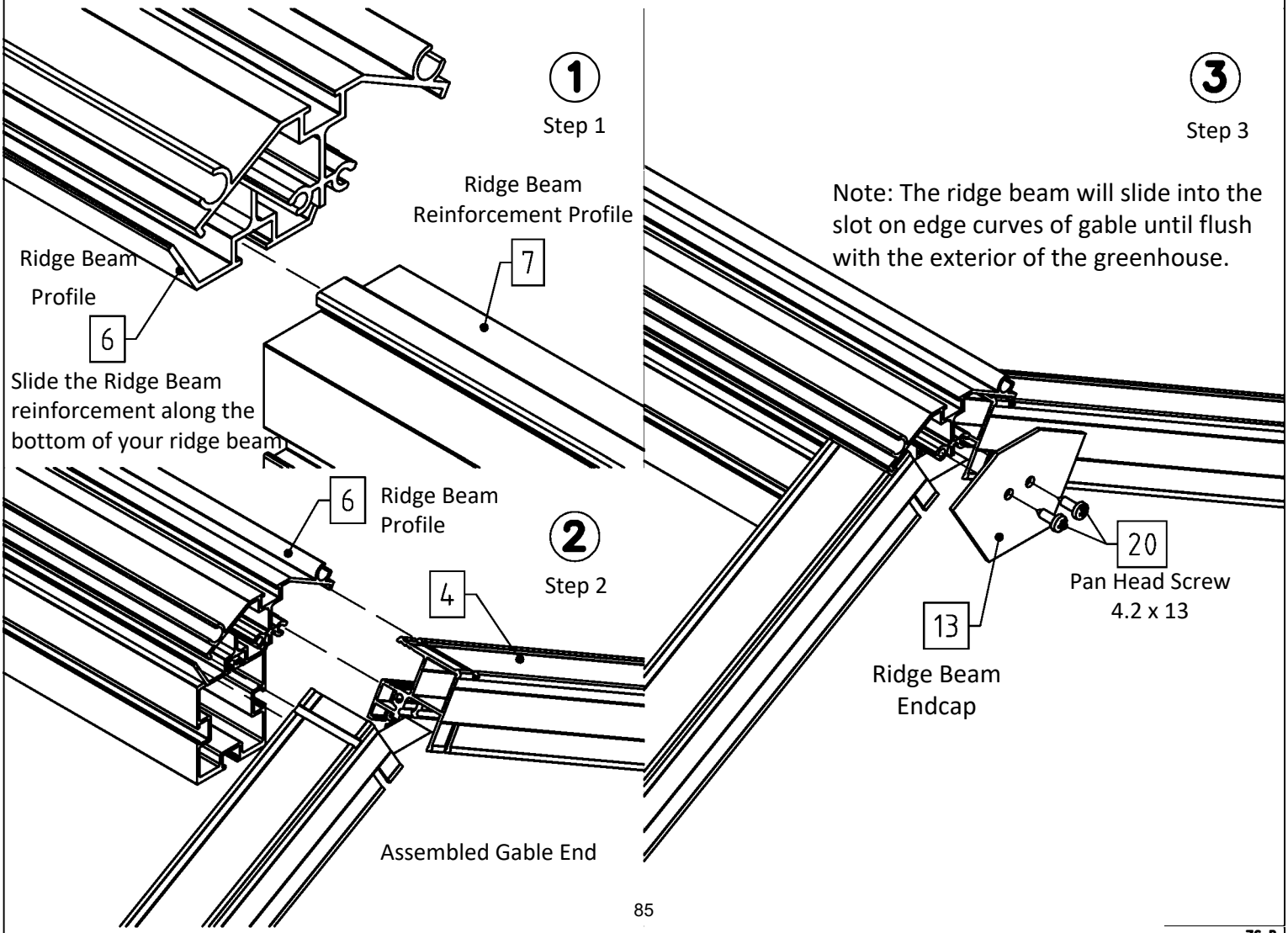

Assembled Gable End
4
5
Soil Profile
Soil Profile
5
Insert M6x16 Bolt into the soil profile and gable end - see below
Assembled Gable End
4
Repeat on both sides
2x
5
Soil Profile
M6x16 Bolt
17
1
Step 1
3
Step 3
Repeat on both sides
2x
18
Step 4
2
Step 2
2x
4
Pan Head Screw 4.8 x 16
21
11
Corner Mounting Plate
2x
Repeat on both sides
Floor Profile Connector
12
18
M6 Nut

ZS-A

Reverse View (Outside)

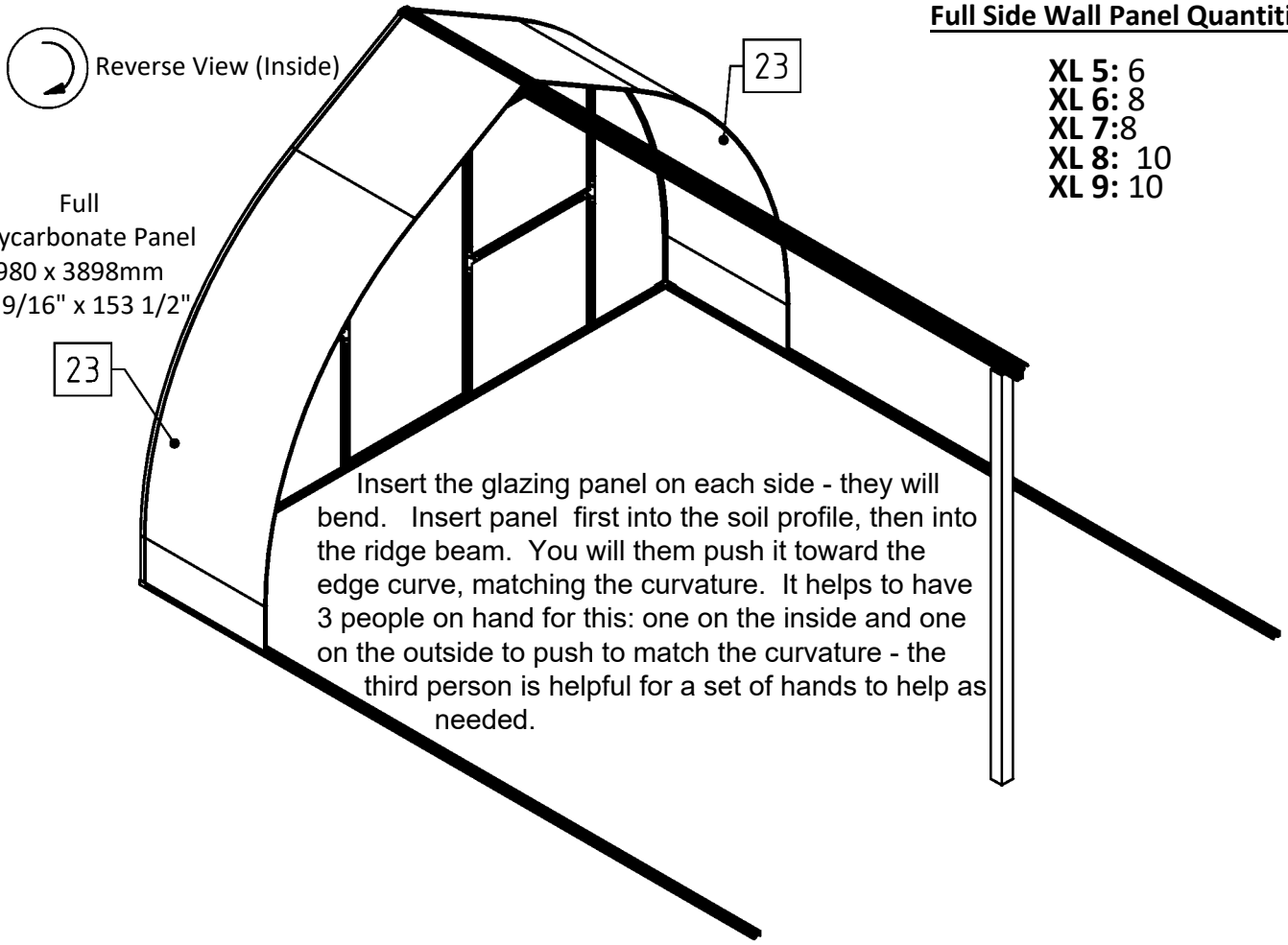
Note: The long ridge beam will need to be supported during this portion of assembly. See beginning of manual for suggested support using 2x4s along the length.



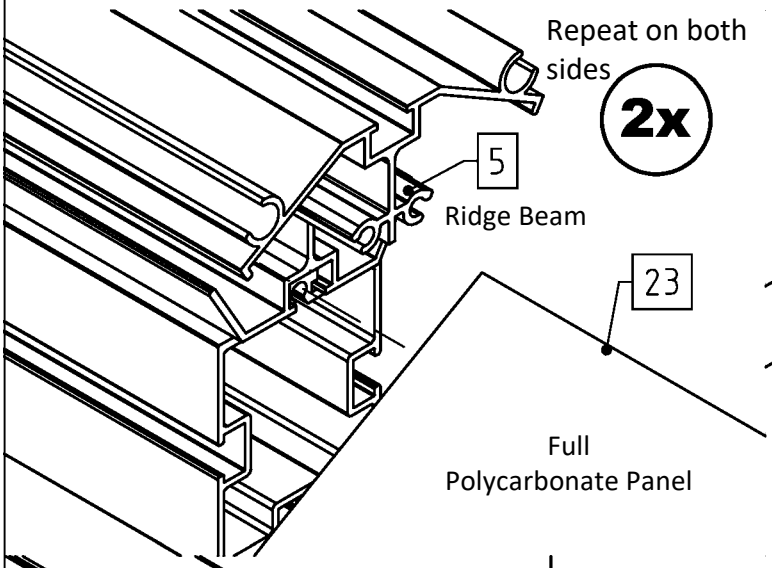


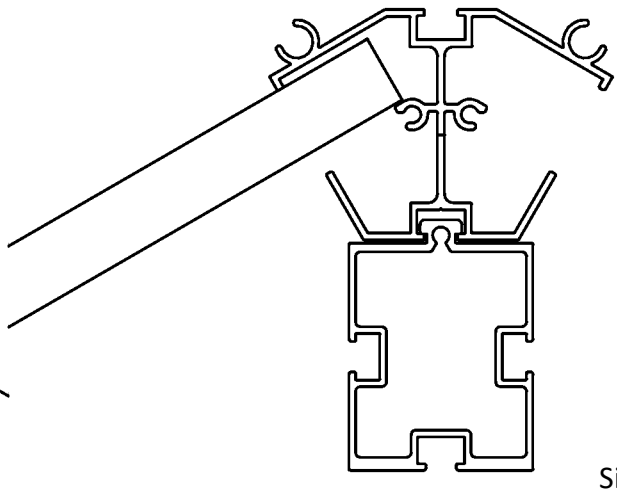
Full Side Wall Panel Quantities

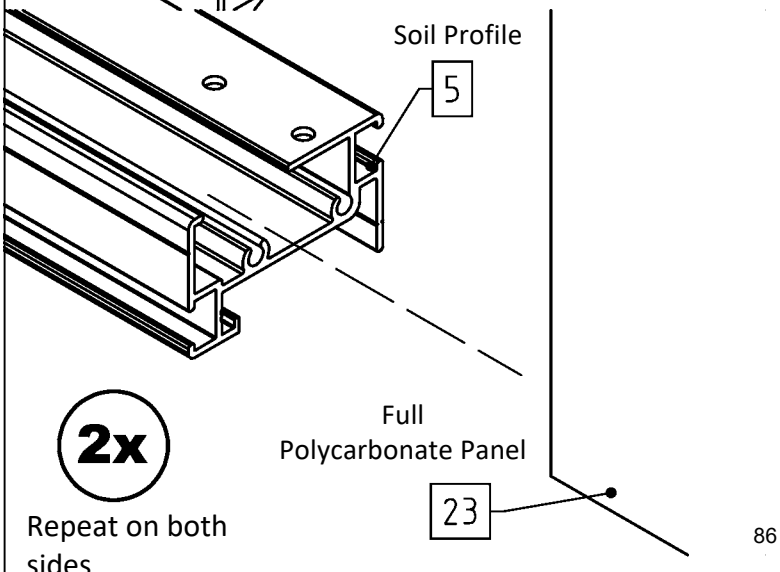
XL 5: 6
XL 6: 8
XL 7:8
XL 8: 10
XL 9: 10

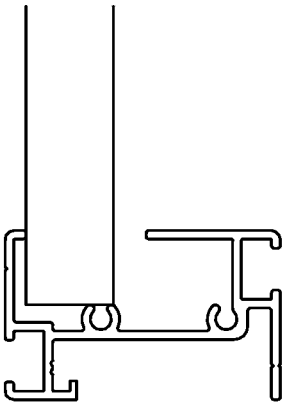


Insert the glazing panel on each side - they will bend. Insert panel first into the soil profile, then into the ridge beam. You will them push it toward the edge curve, matching the curvature. It helps to have 3 people on hand for this: one on the inside and one on the outside to push to match the curvature - the third person is helpful for a set of hands to help as needed.

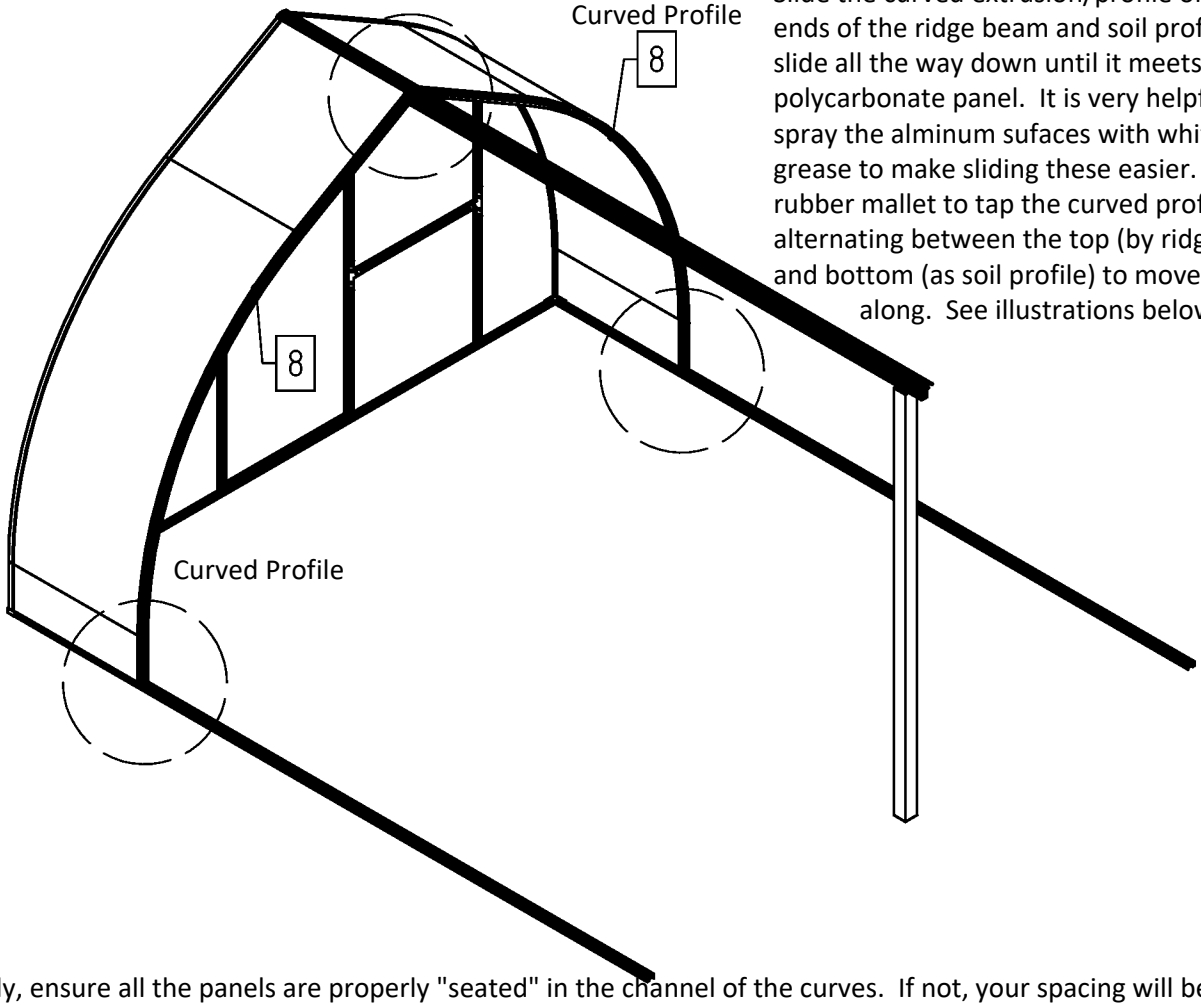






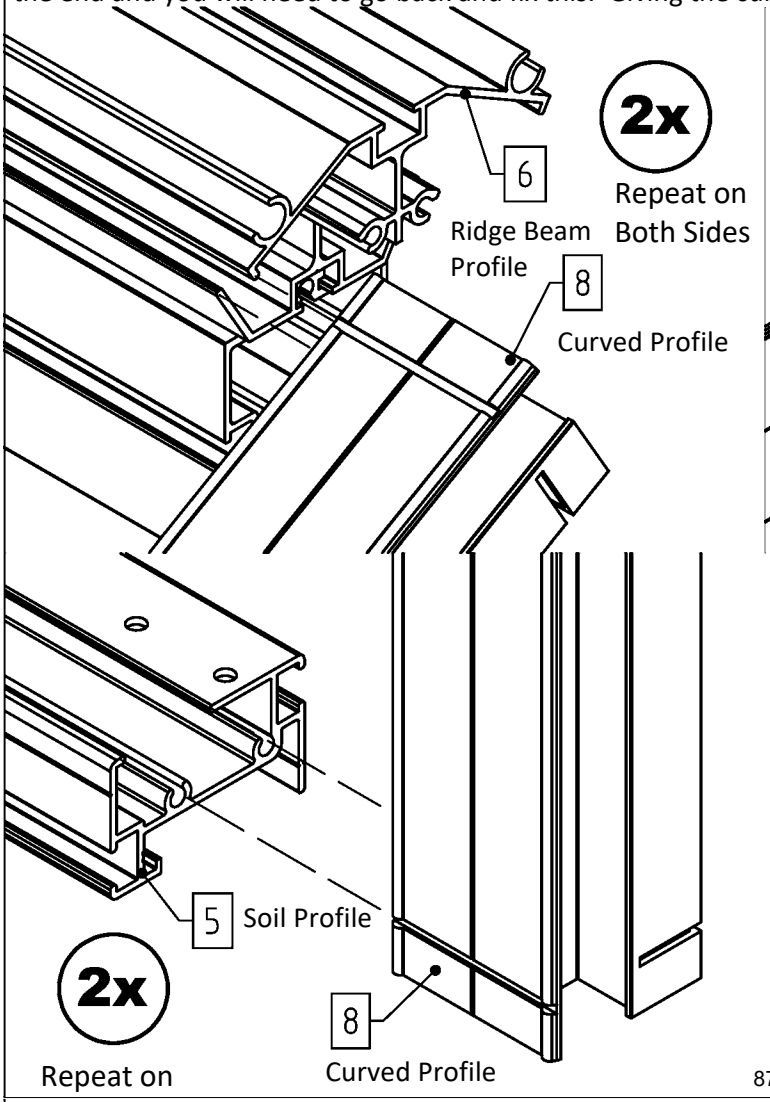


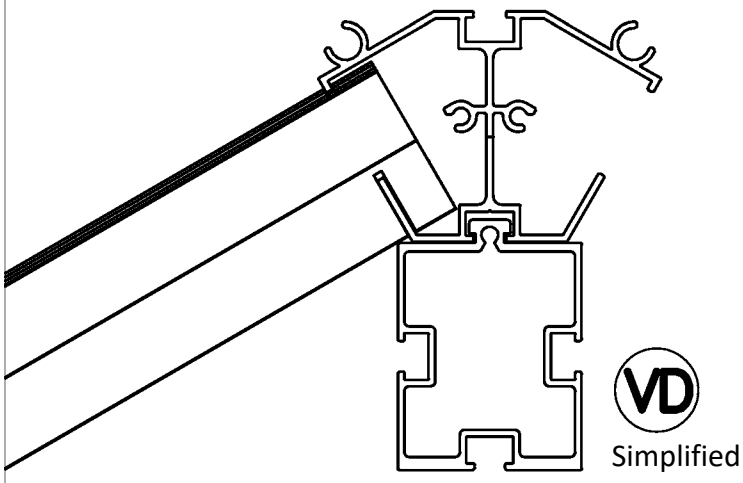
ZS-C

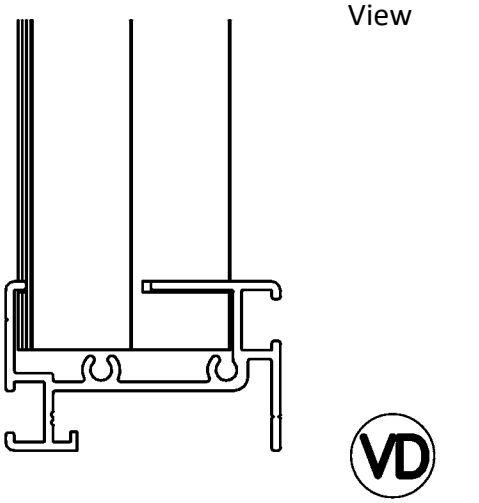


Slide the curved extrusion/profile onto the ends of the ridge beam and soil profile and slide all the way down until it meets the polycarbonate panel. It is very helpful to spray the alminum sufaces with white lithium grease to make sliding these easier. Use a rubber mallet to tap the curved profile, alternating between the top (by ridge beam) and bottom (as soil profile) to move them along. See illustrations below.

During assembly, ensure all the panels are properly "seated" in the channel of the curves. If not, your spacing will be off at the end and you will need to go back and fix this. Giving the curves a few extra hits with the rubber mallet can help.

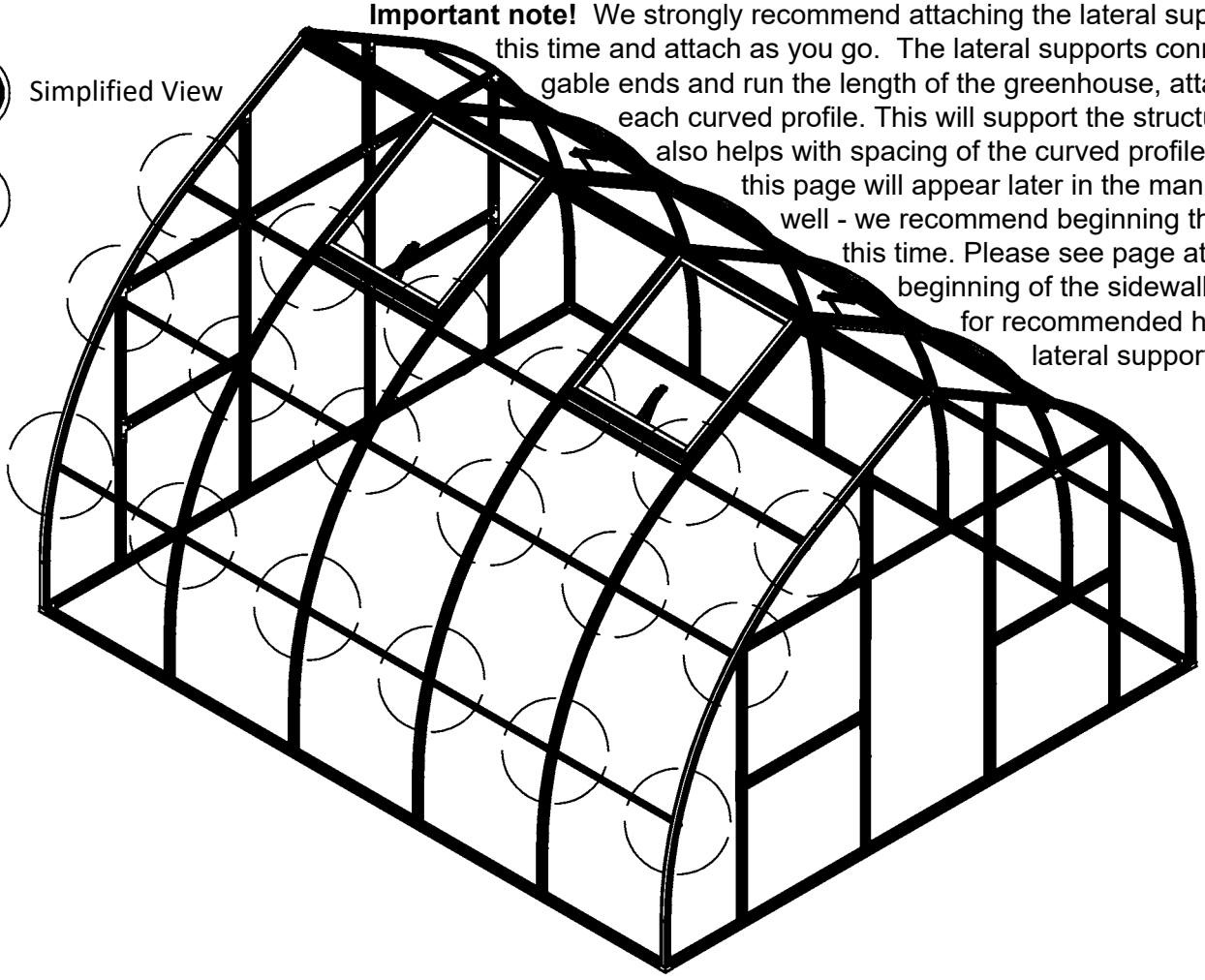


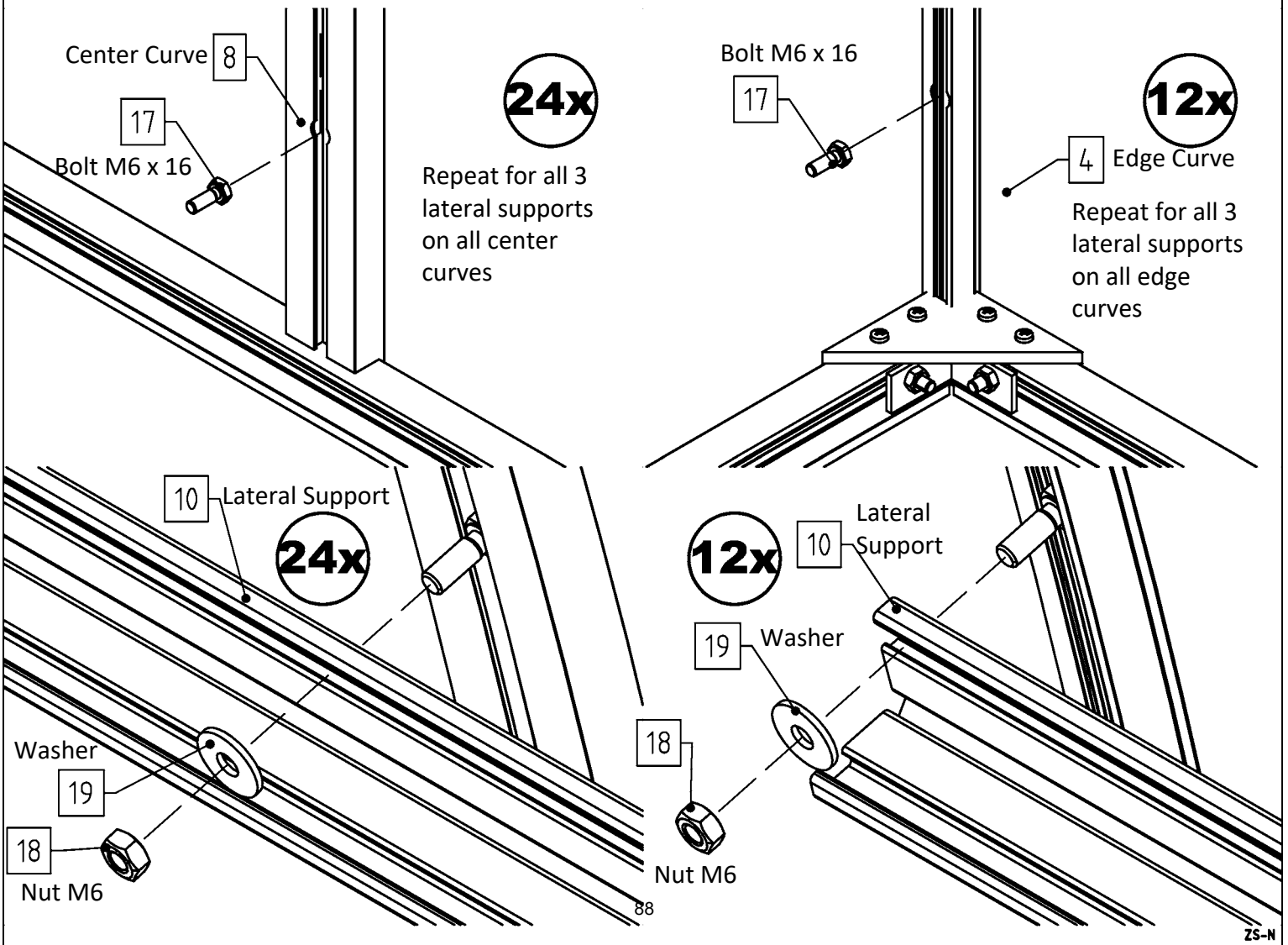




VD Simplified View

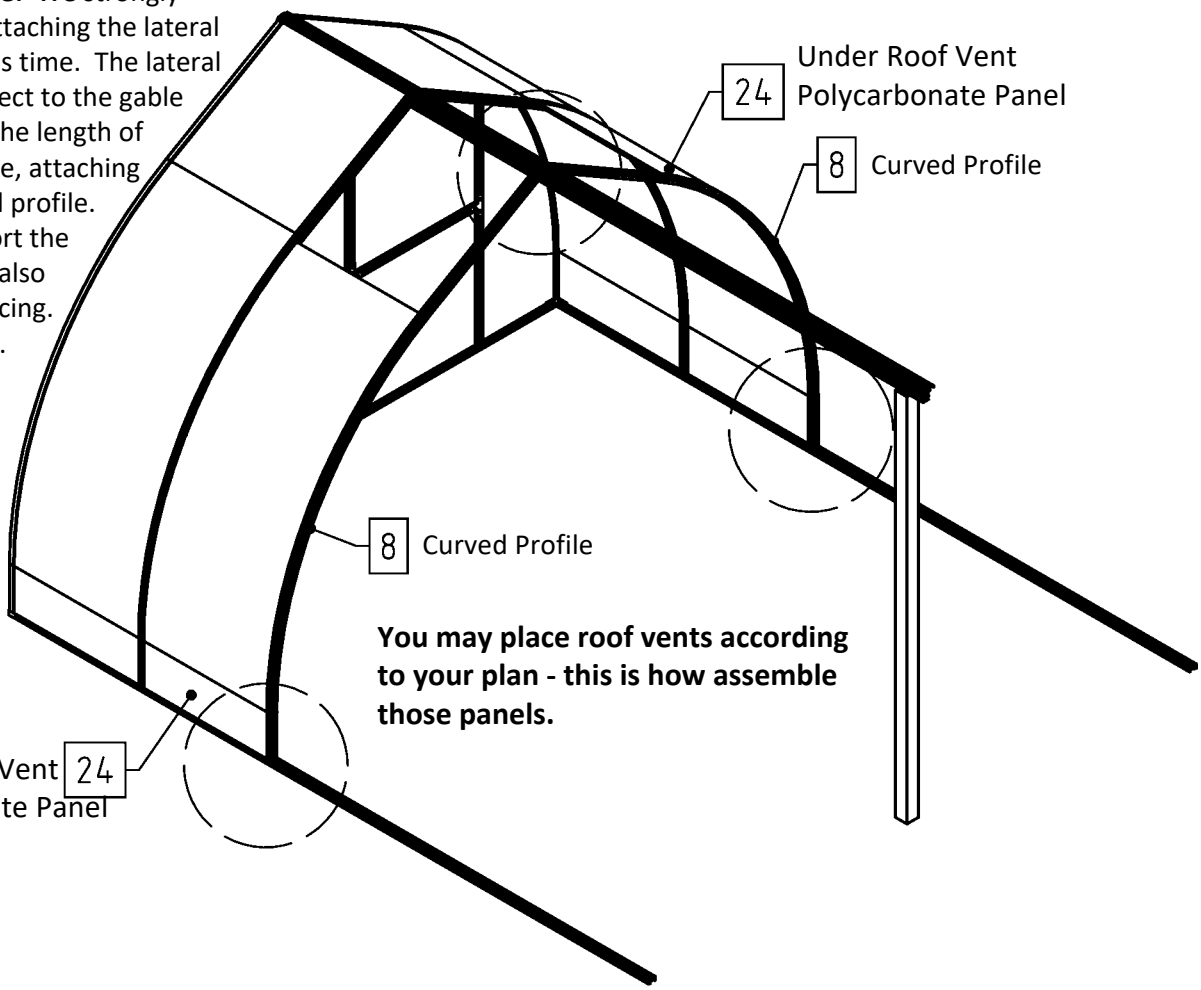
Important note! We strongly recommend attaching the lateral supports at this time and attach as you go. The lateral supports connect to the gable ends and run the length of the greenhouse, attaching to each curved profile. This will support the structure, but also helps with spacing of the curved profiles. Note, this page will appear later in the manual as well - we recommend beginning this step at this time. Please see page at the beginning of the sidewall section for recommended height of lateral supports.



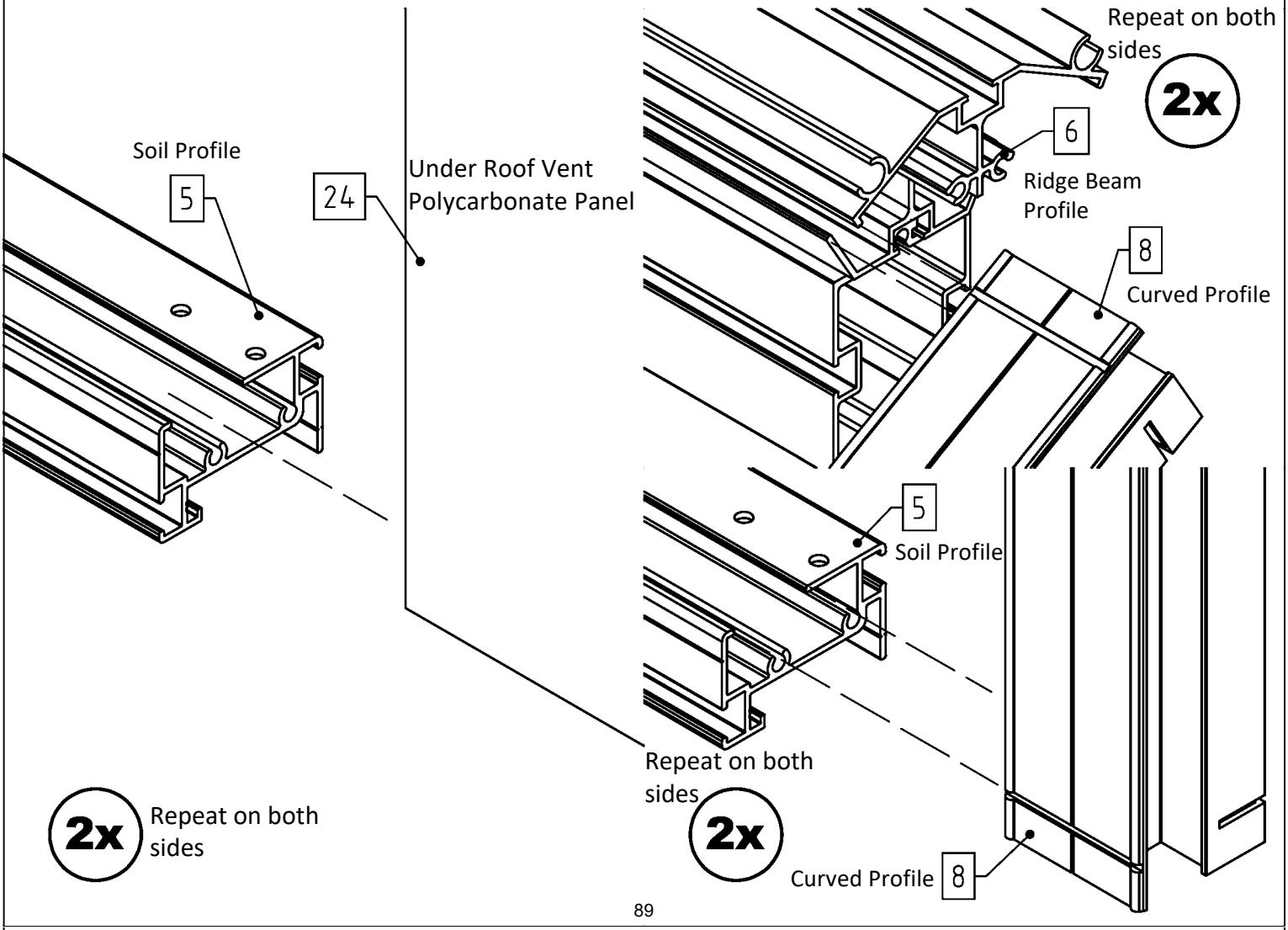


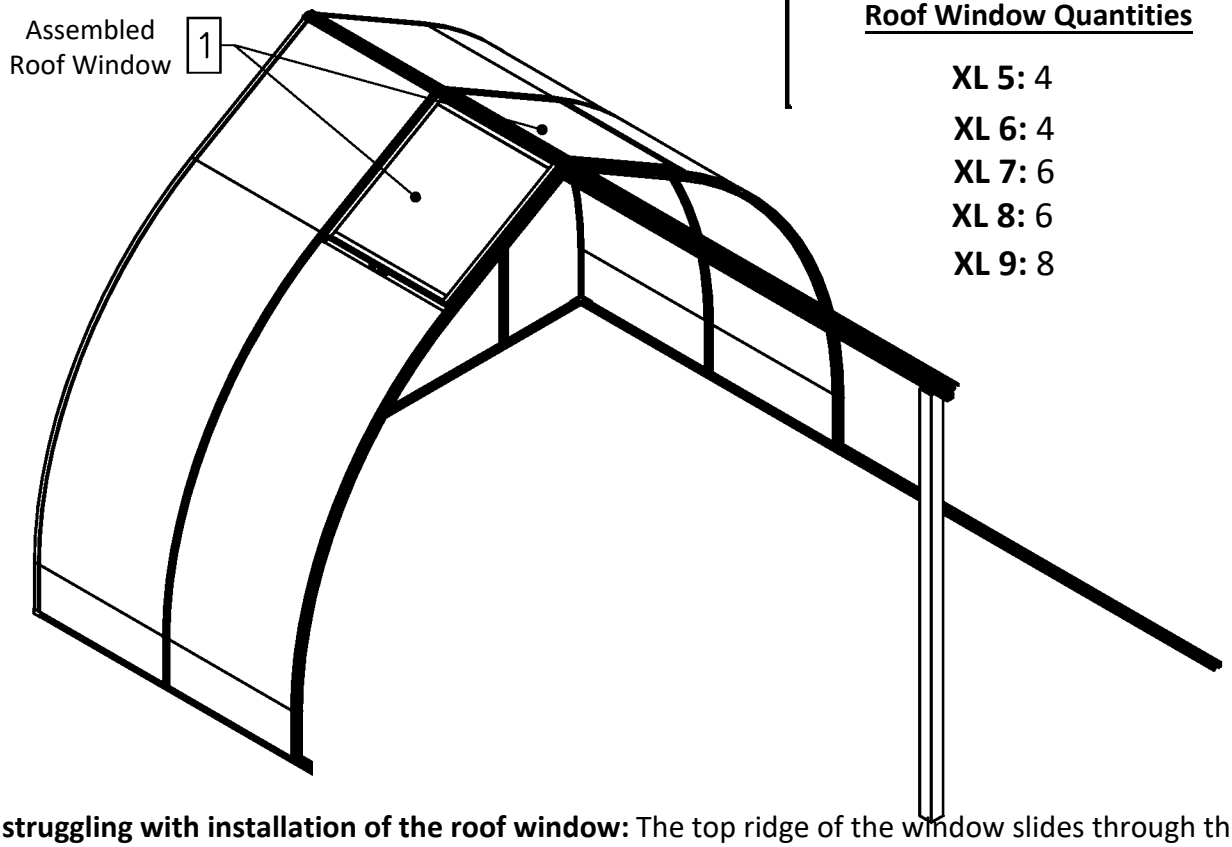
ZS-N

Important note: We strongly recommend attaching the lateral supports at this time. The lateral supports connect to the gable ends and run the length of the greenhouse, attaching to each curved profile. This will support the structure, but also helps with spacing. See prior page.



You may place roof vents according to your plan - this is how assemble those panels.

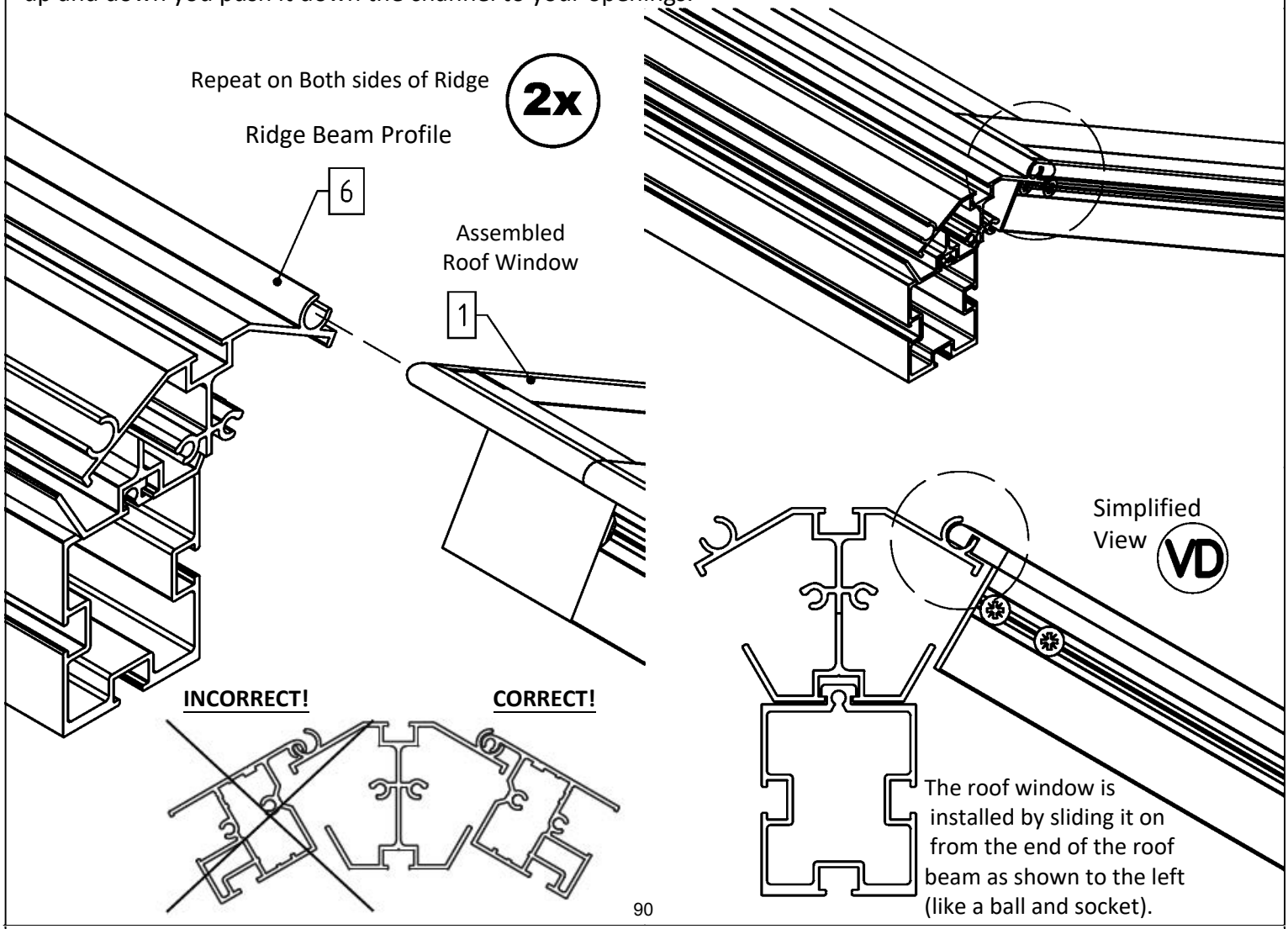




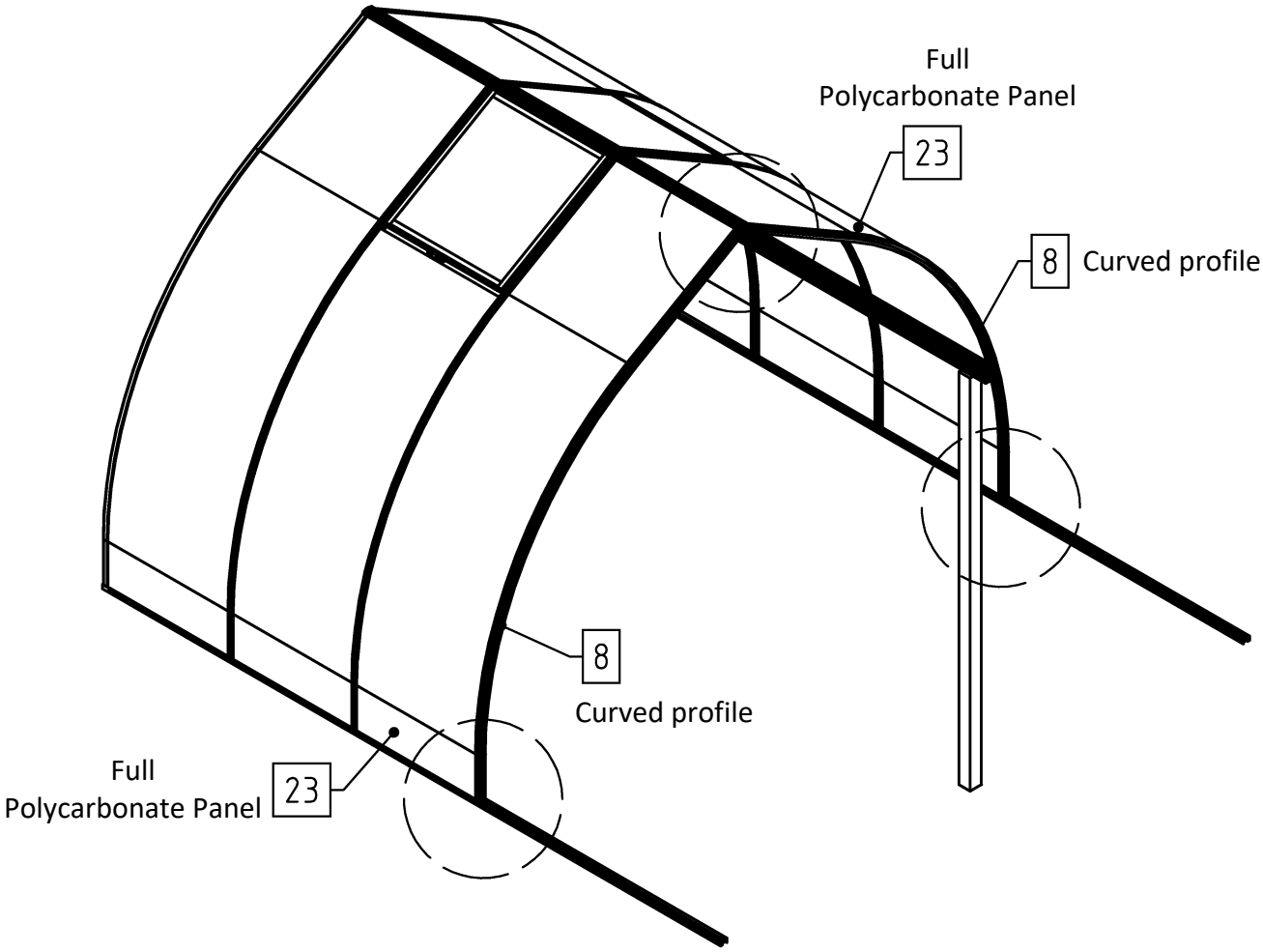
Roof Window Quantities

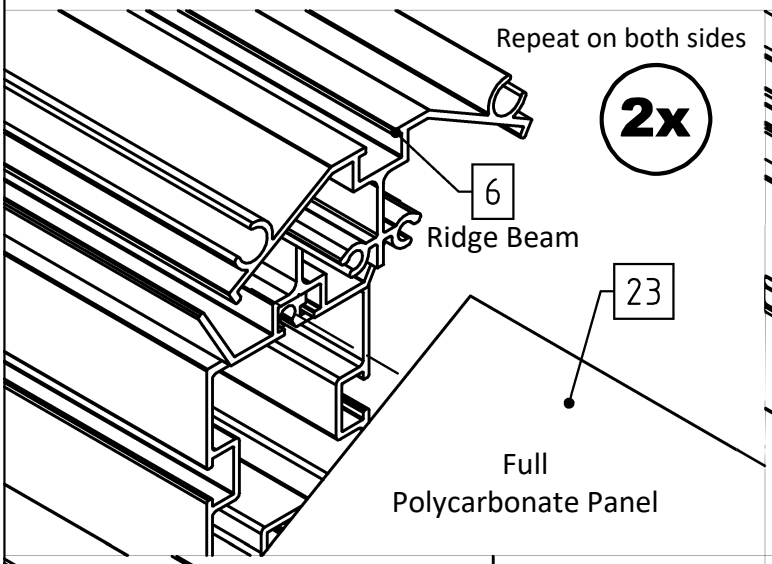
XL 5: 4
XL 6: 4
XL 7: 6
XL 8: 6
XL 9: 8

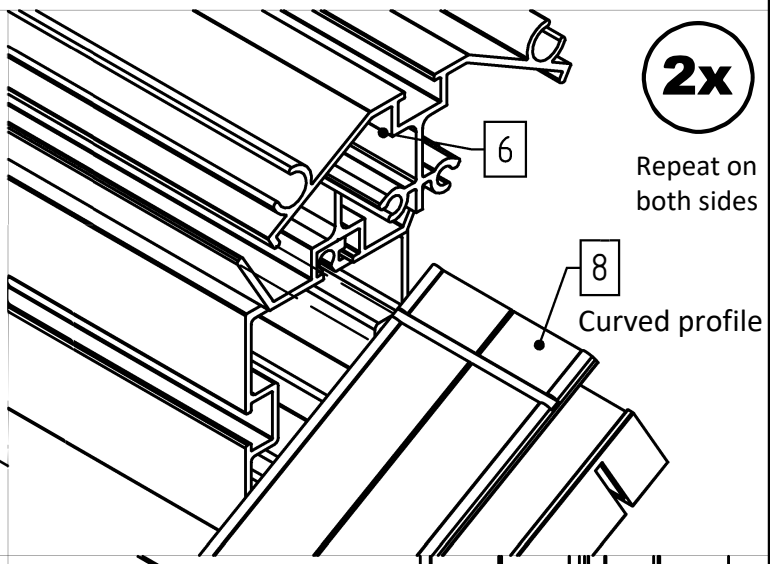
If you are struggling with installation of the roof window: The top ridge of the window slides through the very narrow channel on top of the roof beam. Spray both the channel and the top of the window bar with white lithium grease (rub it on). While standing high up on a stable stepladder/platform, hold the window at about a 45º angle and slide it in from the very end of the ridge beam - it needs to remain perfectly straight. Once inserted, you can move the window up and down (but only by about 20º) and as you move up and down you push it down the channel to your openings.

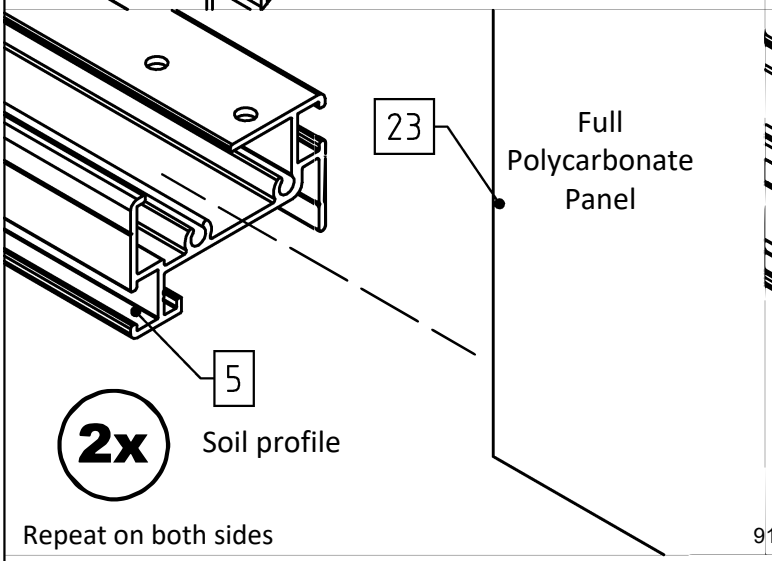


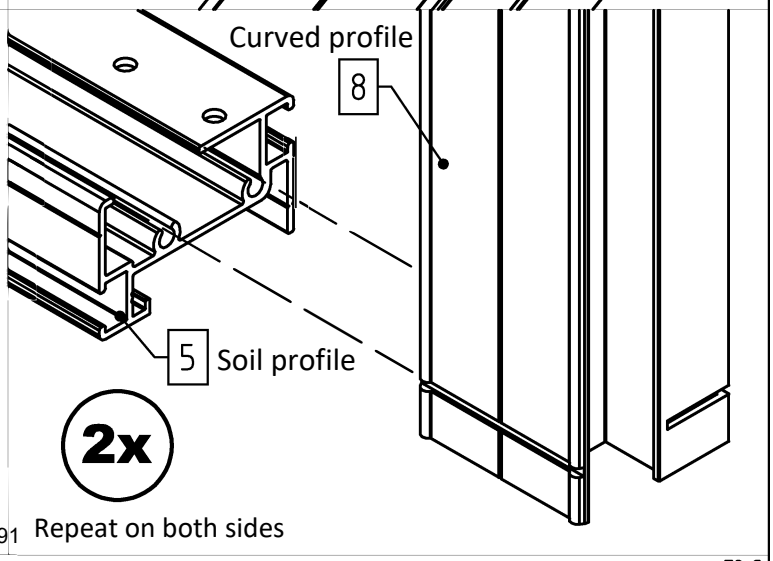
The roof window is installed by sliding it on from the end of the roof beam as shown to the left (like a ball and socket).

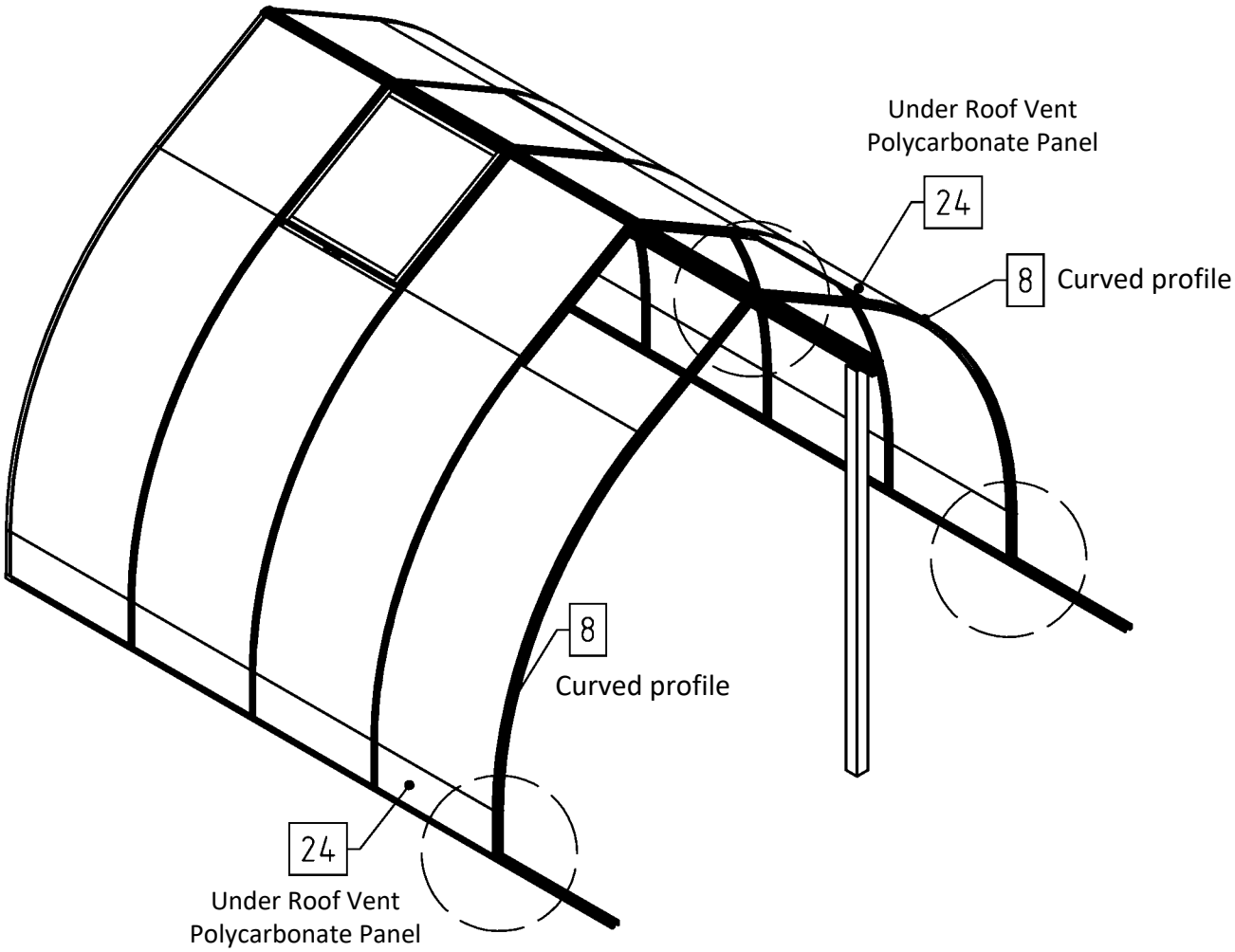

Full
Polycarbonate Panel
23
8
Curved profile
8
Curved profile
Full
Polycarbonate Panel
23

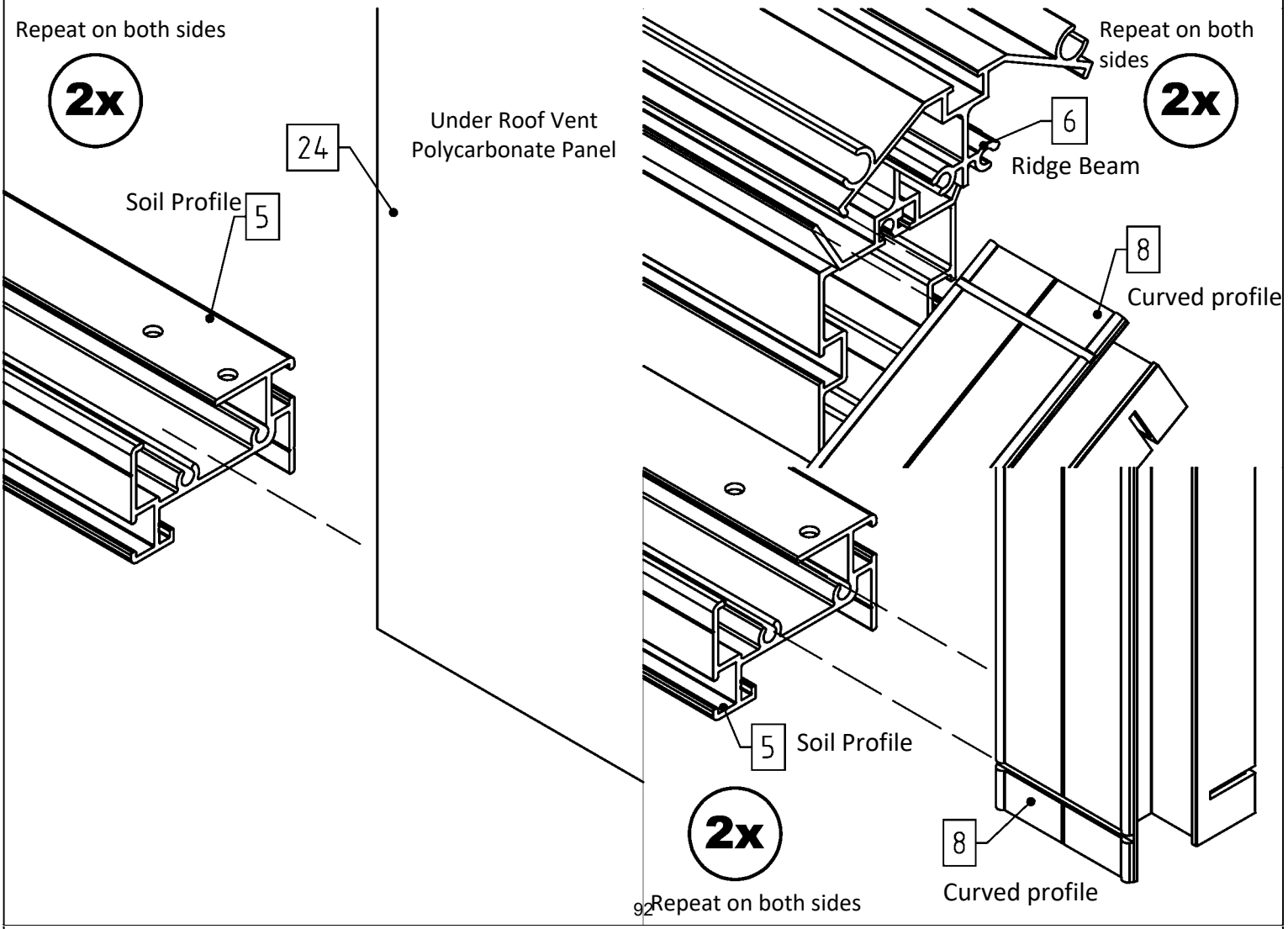

Repeat on both sides
2x
6
Ridge Beam
23
Full
Polycarbonate Panel

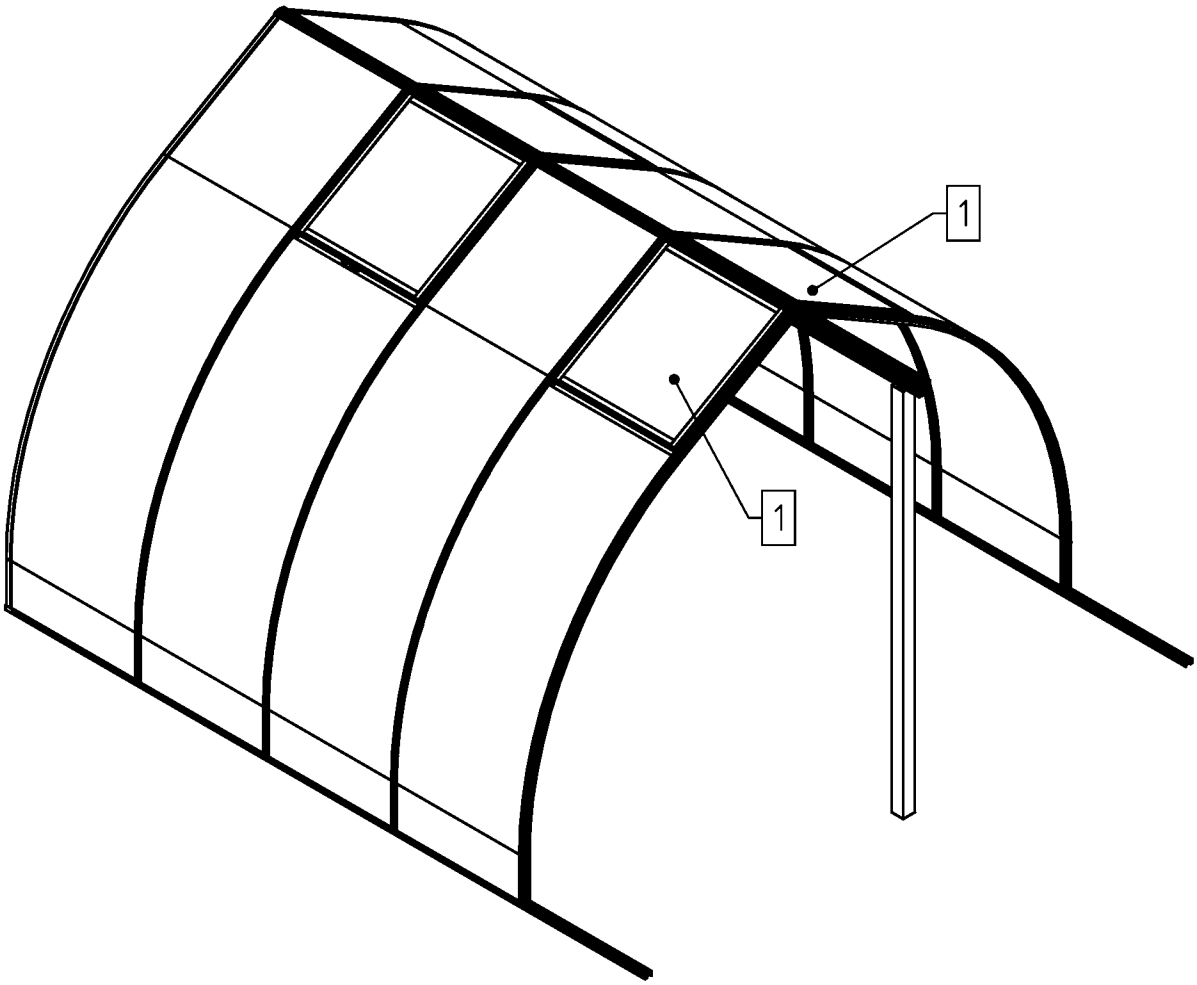

2x
6
Repeat on
both sides
8
Curved profile


23
Full
Polycarbonate
Panel
5
2x
Soil profile
Repeat on both sides


Curved profile
8
5
Soil profile
2x
Repeat on both sides


Under Roof Vent
Polycarbonate Panel
24
8
Curved profile
8
Curved profile
24
Under Roof Vent
Polycarbonate Panel


Repeat on both sides
2x
24
Under Roof Vent
Polycarbonate Panel
Soil Profile
5
Repeat on both
sides
2x
6
Ridge Beam
8
Curved profile
5
Soil Profile
2x
Repeat on both sides
8
Curved profile



Repeat on both sides

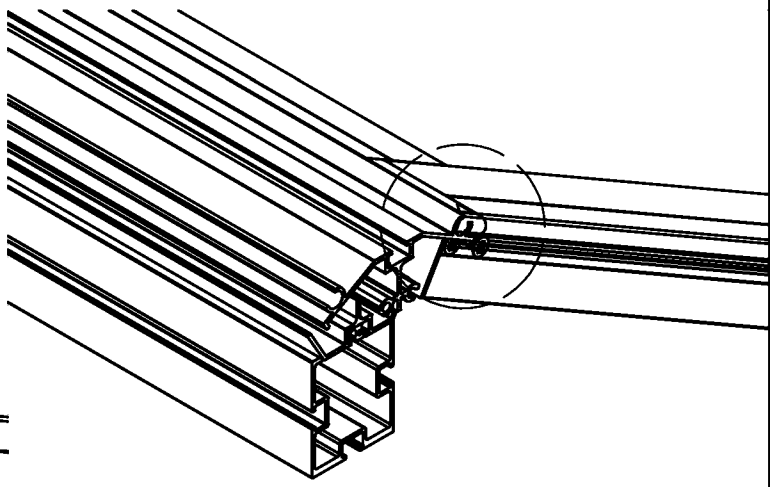
2x

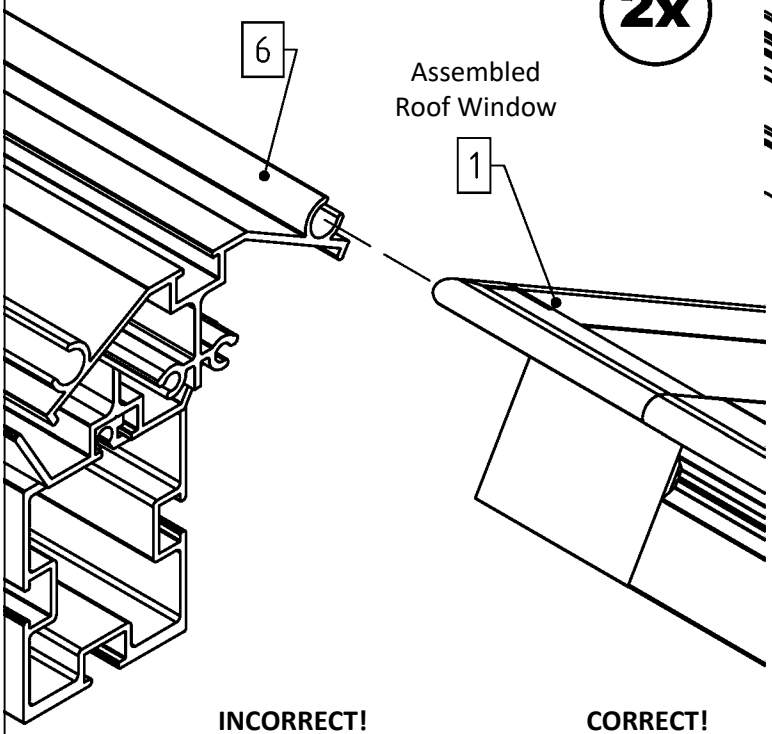
Ridge Beam Profile

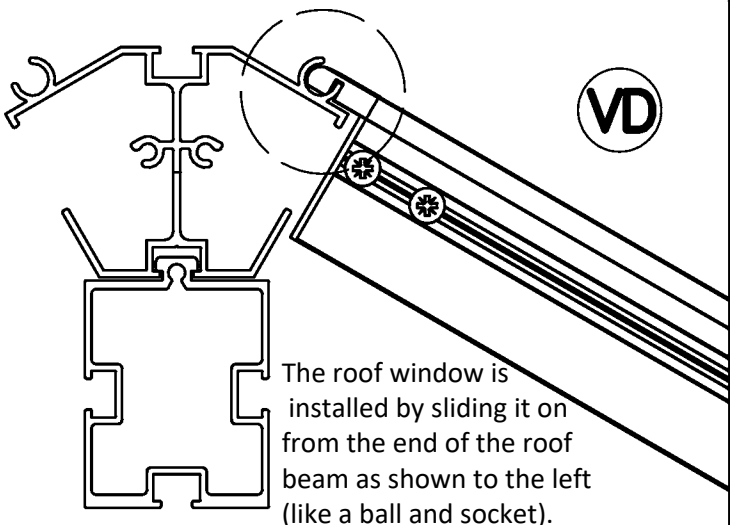
6

Assembled
Roof Window

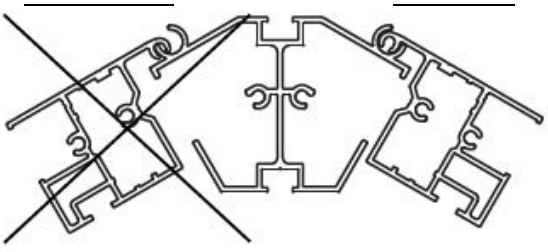
1



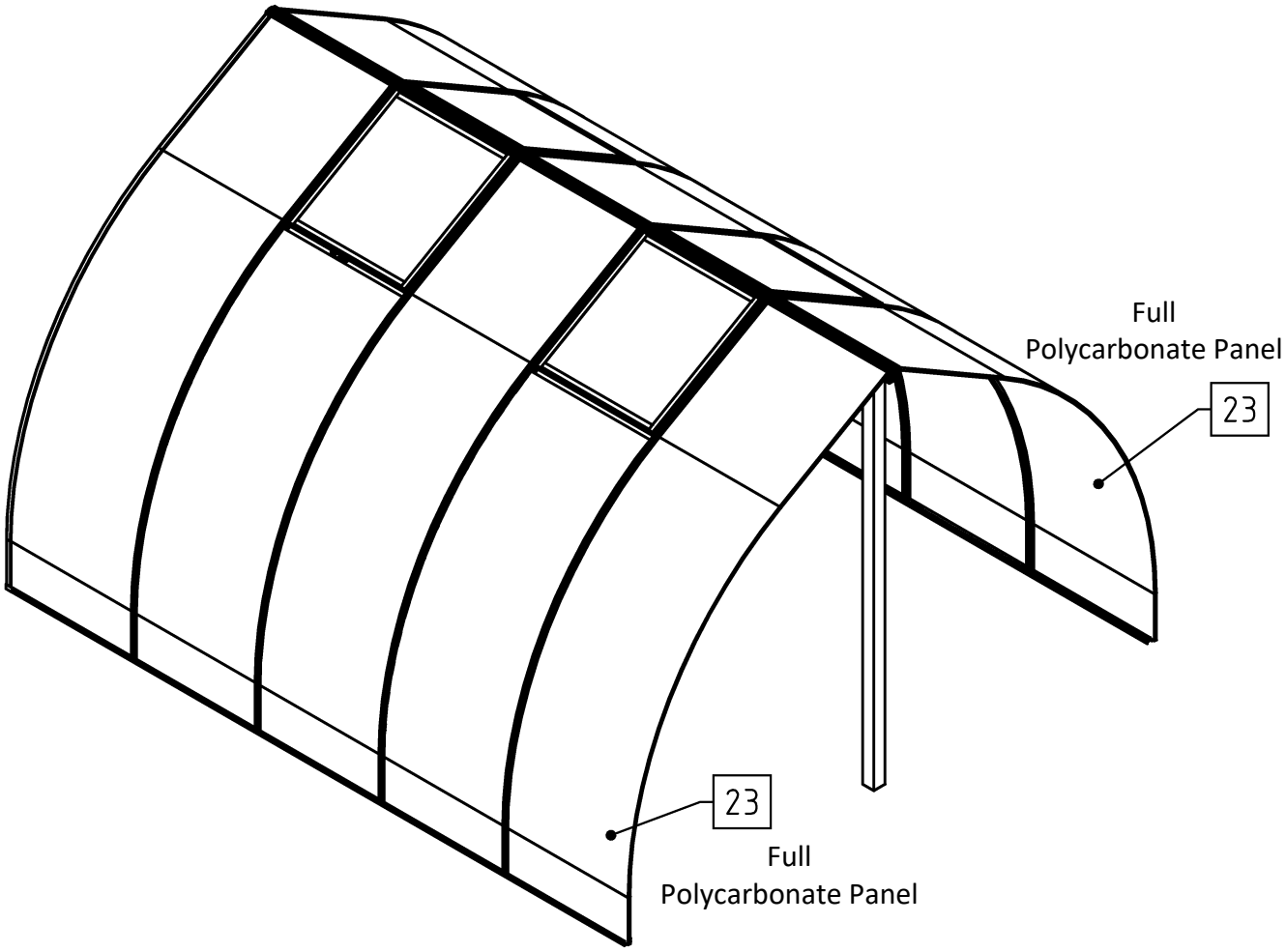


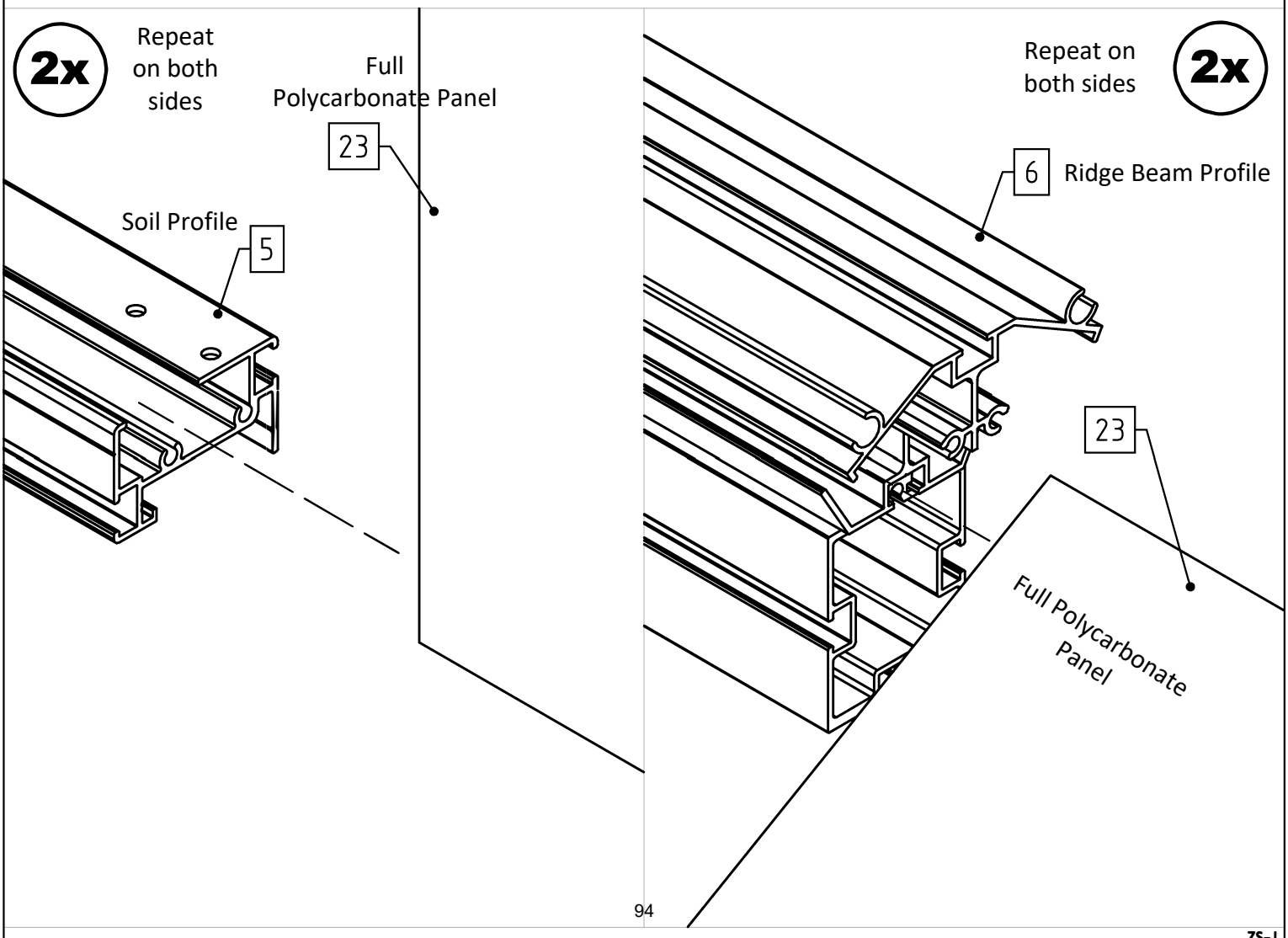


INCORRECT! **CORRECT!**



The roof window is installed by sliding it on from the end of the roof beam as shown to the left (like a ball and socket).


Full
Polycarbonate Panel
23
23
Full
Polycarbonate Panel

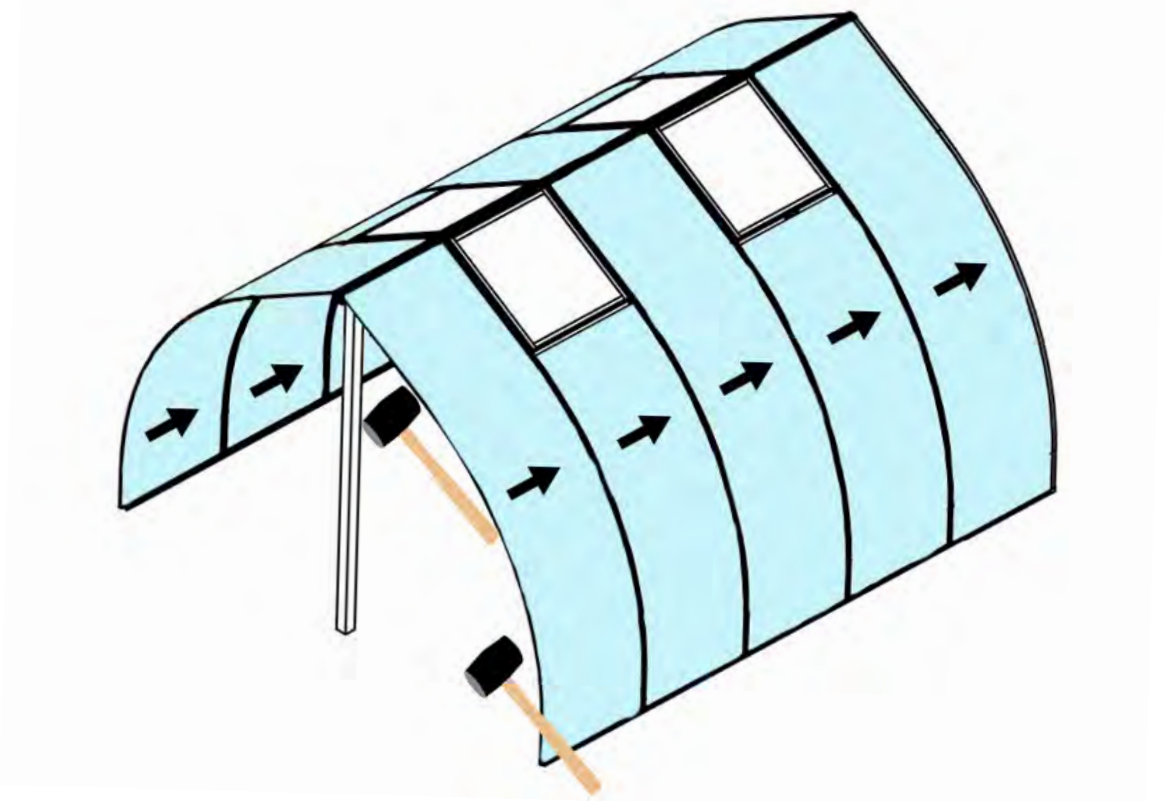

2x
Repeat
on both
sides
Full
Polycarbonate Panel
23
Soil Profile
5
Repeat on
both sides
2x
6
Ridge Beam Profile
23
Full Polycarbonate
Panel

Assembly procedure - additional tips

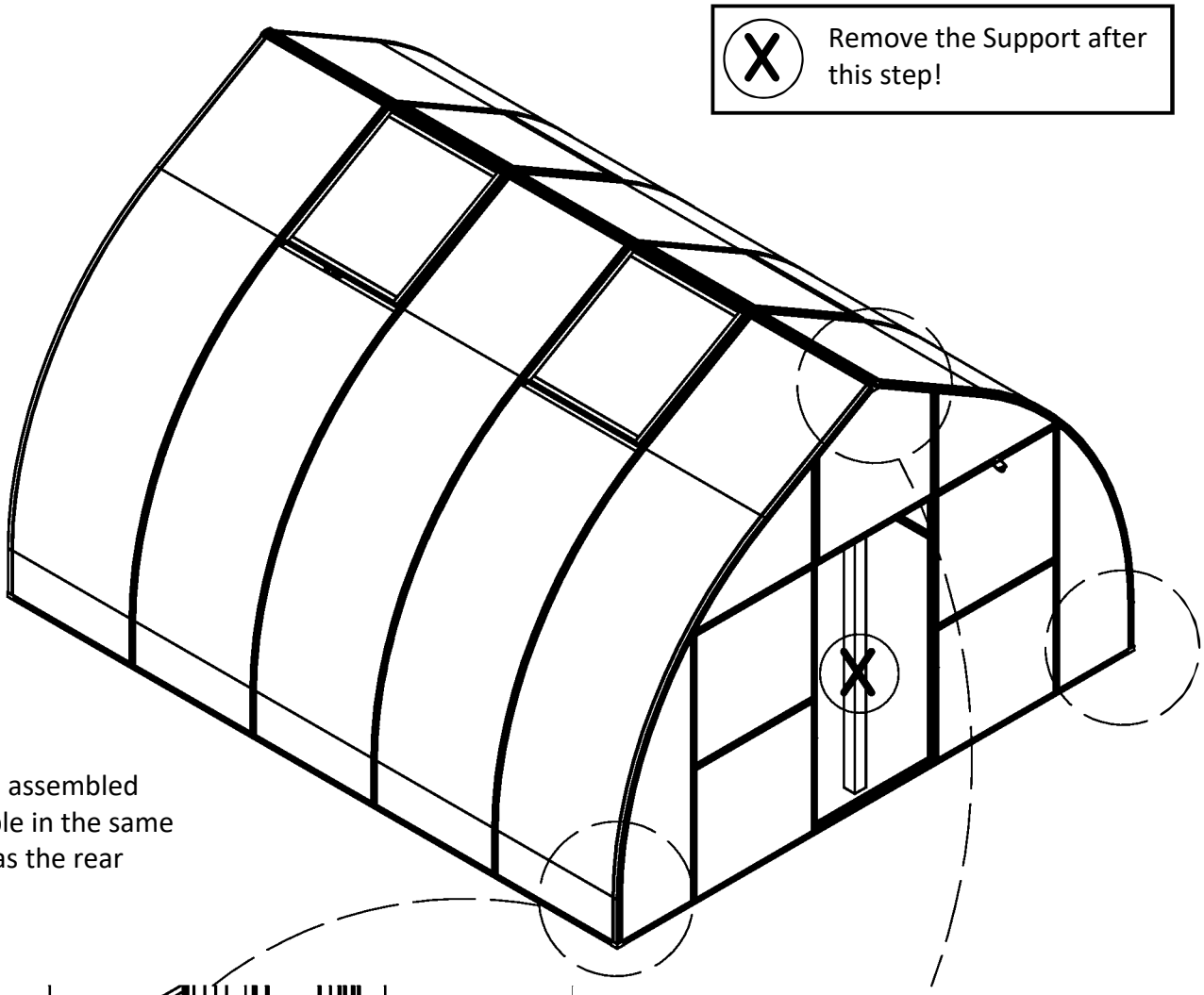
Try the following options if your gable end does not fit properly and there is an inch of space between the gable end and the polycarbonate. The polycarbonate needs to be inserted about a 1/2" into the curved profile channel - it may not be far enough which could be causing this gap.

Ratchet Strap: use a ratchet strap and attach one side to the installed gable end (back wall) then to the front gable end. Gradually pull on the ratchet strap until the the front gable end is installed to be flush and there are no gaps.

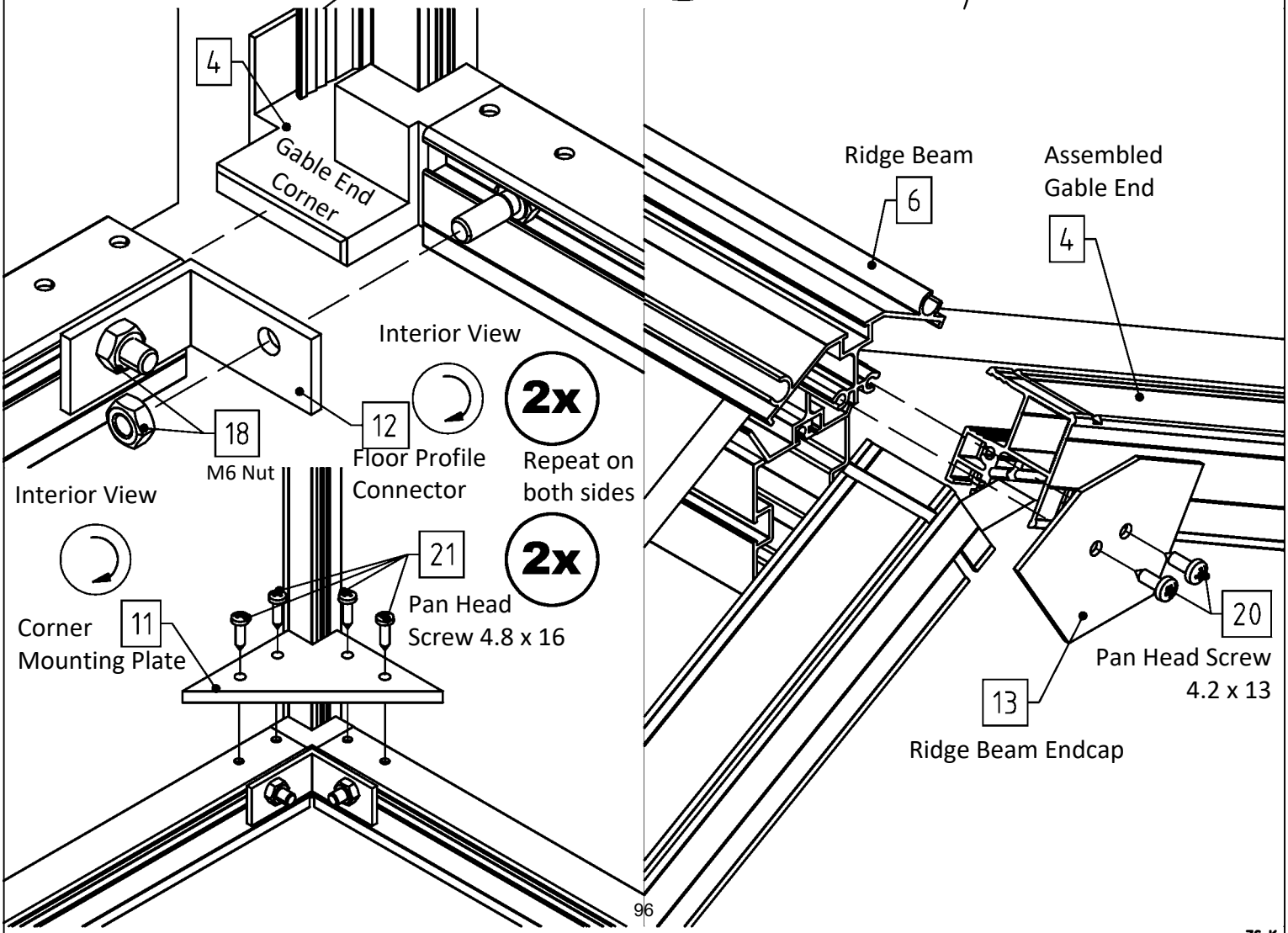
Rubber Mallet: start at the completed gable end and slide the polycarbonate panels as far as they can go into the channel. Then, hit the curved profile with rubber mallet. Hit the curve profile near the top and near the bottom to slide the profile evenly. It may help to have (2) people doing this. This will close the gap in the opposite gable end.



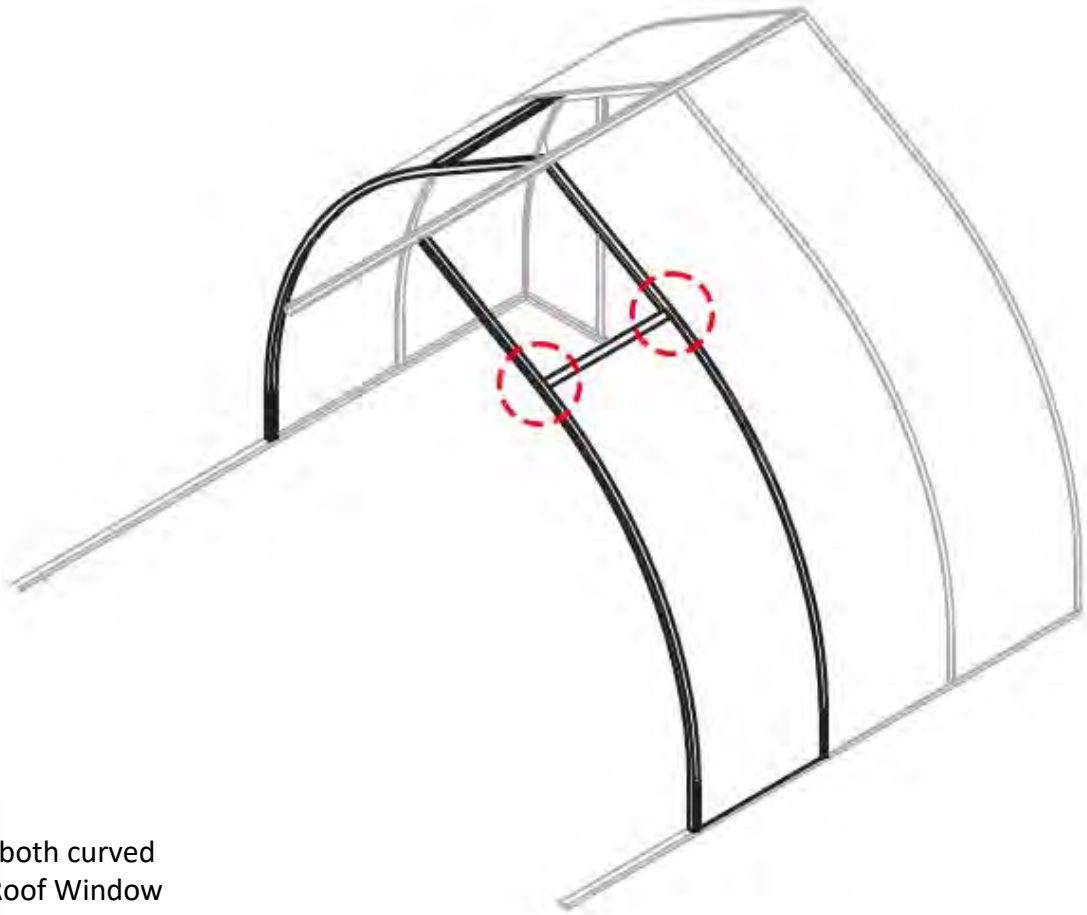
Remove the Support after this step!



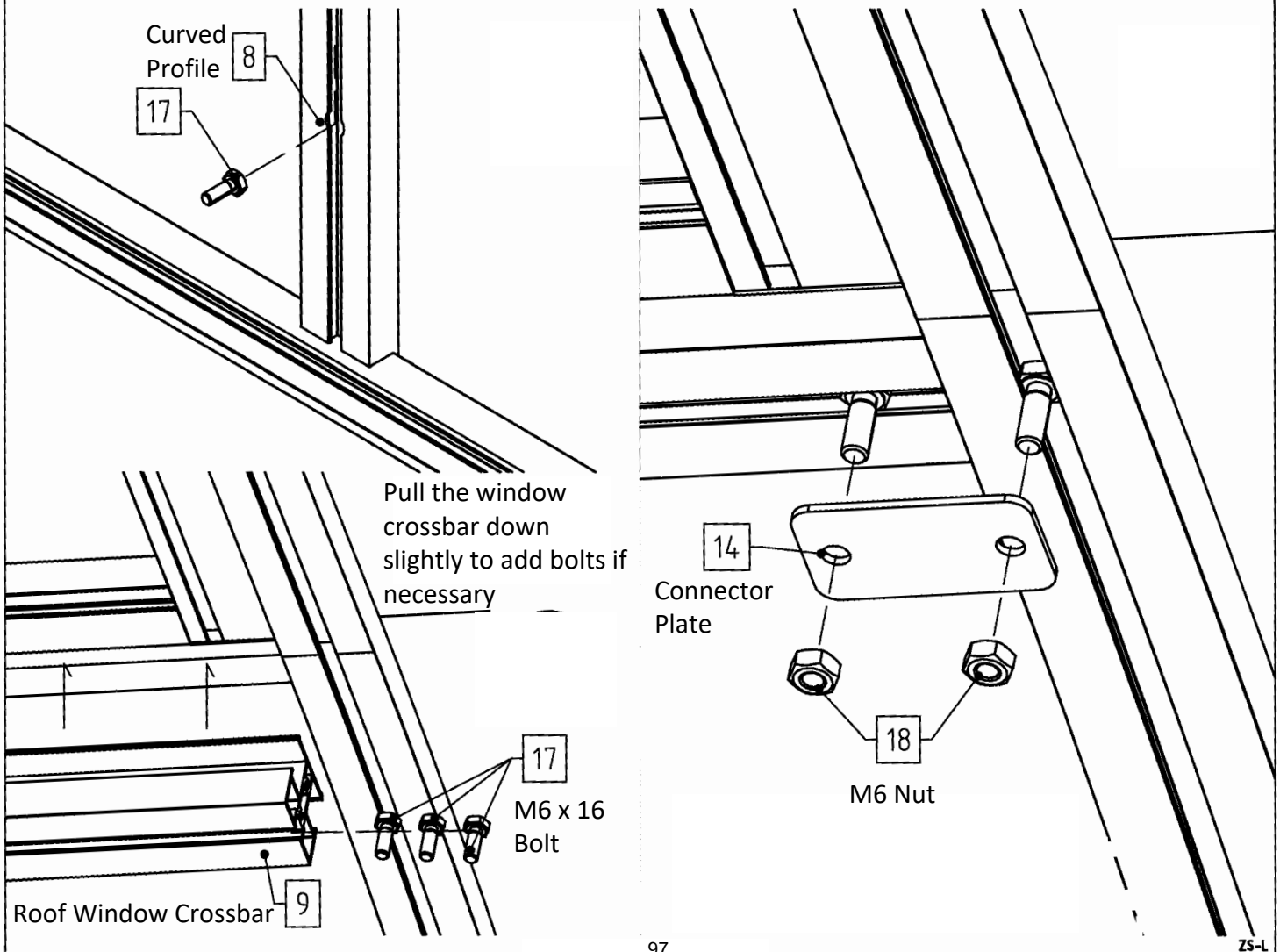
Attached assembled front gable in the same manner as the rear gable

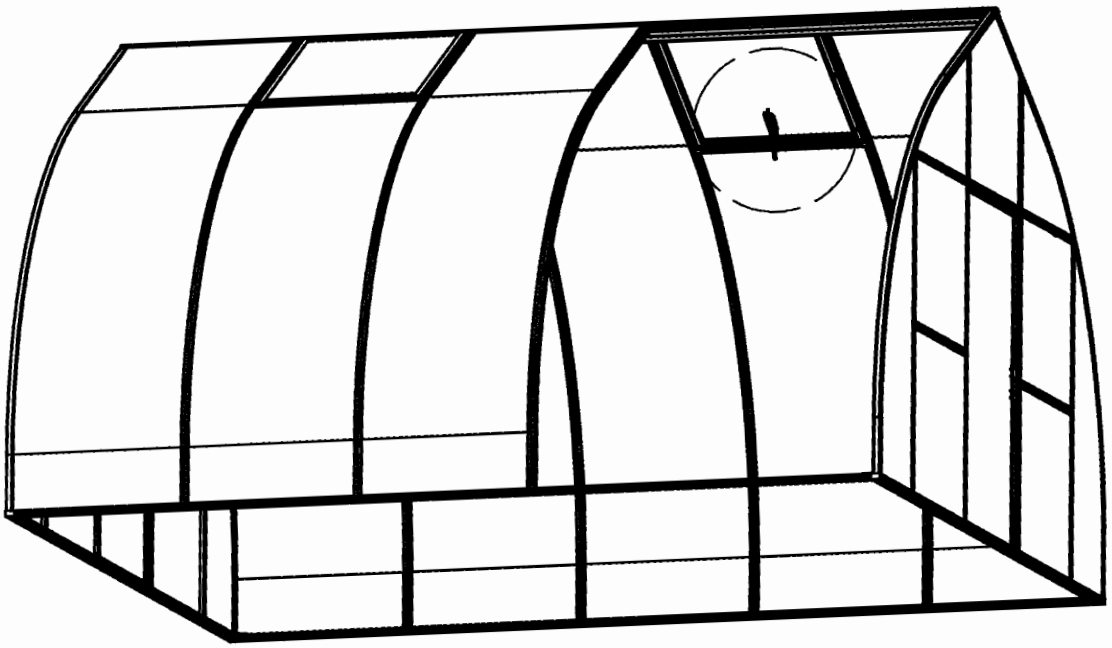


ZS-K

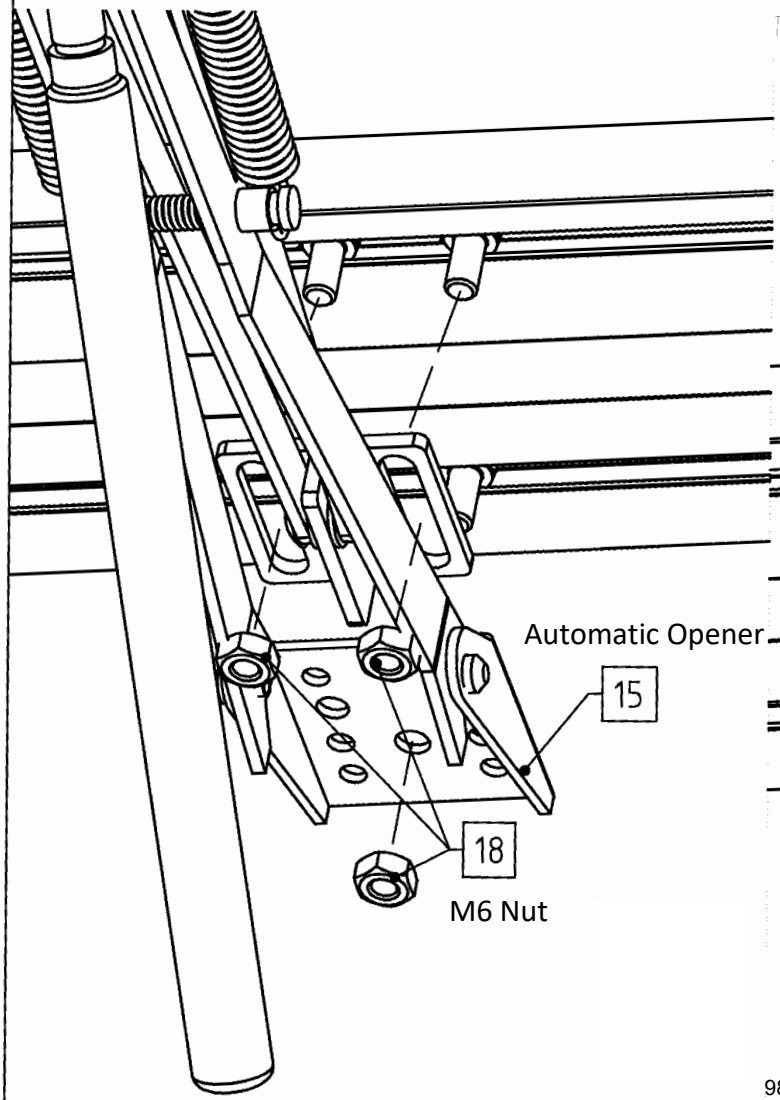


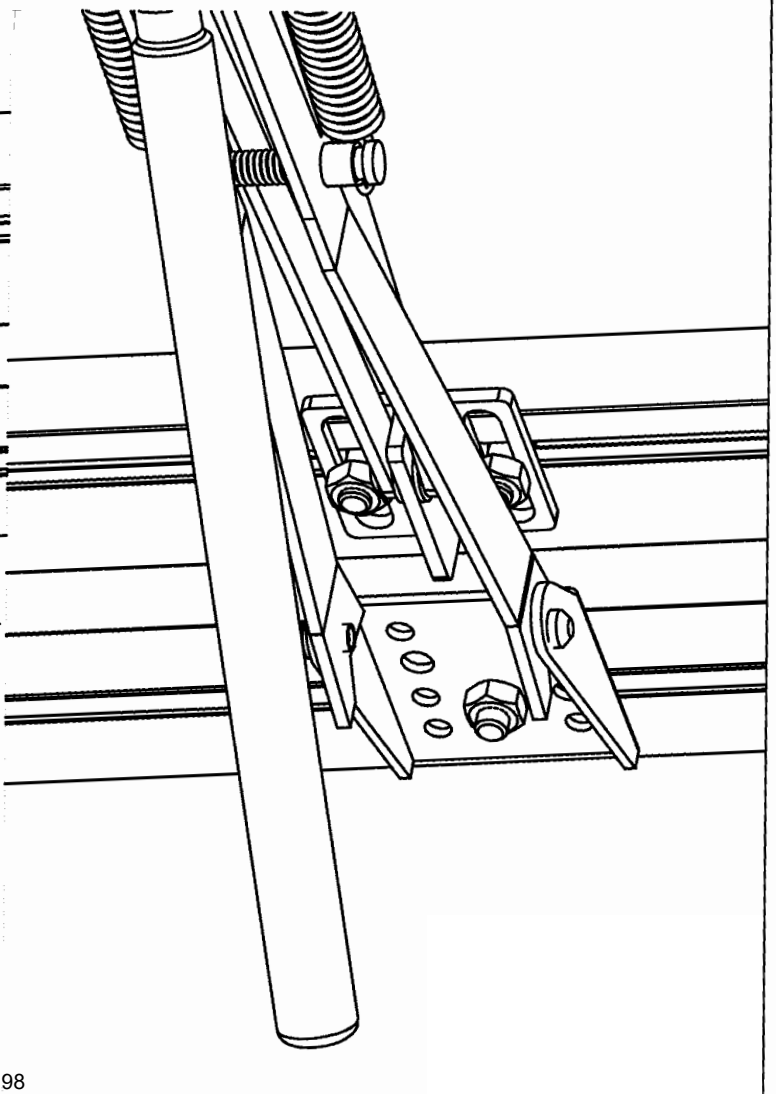
Add Bolts in both curved profiles for Roof Window





The Automatic Window Opener must be parallel to the roof window in order to open properly.

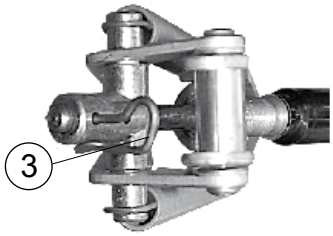


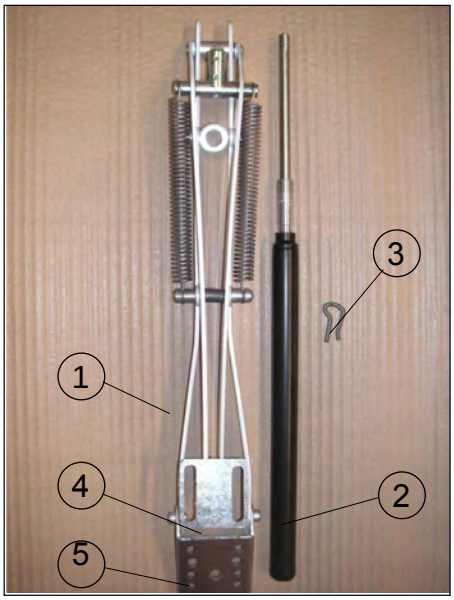


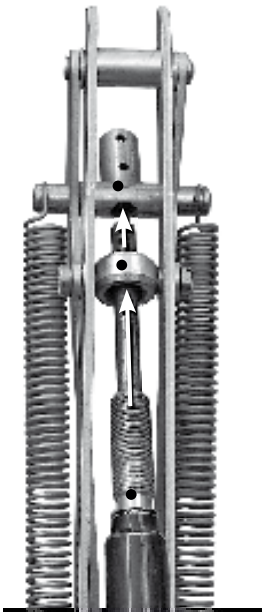
ZS-M

Automatic Window Opener

1	opener frame
2	pressure cylinder
3	cotter pin
4	mounting plate window profile
5	mounting plate cross bar







Auto Opener Installation

1. Check whether the greenhouse window can open and close freely and unhindered.
2. Install the opener with the mounting plate (4) in the center of the lower roof window profile (pos 4.2)
3. Secure the cylinder by lining up the hole in the piston with the upper hole in the T-coupling, then insert the cotter pin.
4. Install the mounting plate (5) in the center of the cross bar(pos 3.2) using the middle hole in the mounting plate(5)
5. Attach the opener frame (1) to the mounting plate (5) please see bottom of next page for correct placement to avoid bursting your piston. Open the roof window until the threads of the piston (2) engage the threads of the opener frame (1). Thread the piston (2) half way into the threads in the opener frame (1). If you are struggling to thread the piston in - place it in the fridge for 15 minutes then try again.

Adjustment:

Let the opener acclimate to the greenhouse for 3-4 hours before you make adjustments.
For earlier engagement and a larger opening, turn the cylinder clockwise. For a delayed engagement and a smaller opening turn the cylinder counter clockwise. Make sure you don't back it out too far. For opening engagement advance/delay one full turn is about 1 degree Fahrenheit. Please keep in mind that greenhouse temperatures can vary and windows can have different opening tolerances.

Winter-usage:

When the temperature decreases and window opening is not desired - or when heating the greenhouse:
1. Either unscrew the cylinder from the cylinder housing so the piston is hanging from the cotter pin and and cannot open the window OR pinch the arms of the opener near the mounting plate (5) to release the opener. The cylinder can be left hanging in this position over the winter. If you do not disengage the piston, the pressure will cause the piston to burst. You will need to purchase a replacement from EXACO.
2. Use a sash lock to lock the window shut for the winter so it cannot blow open.

Required Maintenance:

Two to three times a year, check to make sure the piston shaft and cylinder threads are greased and move freely. A dab of light oil such as WD40 or olive oil on the piston shaft and the cylinder threads will be sufficient. Failure to do so could render your opener inoperable.

Riga Greenhouse Window Auto Opener Correct Installation

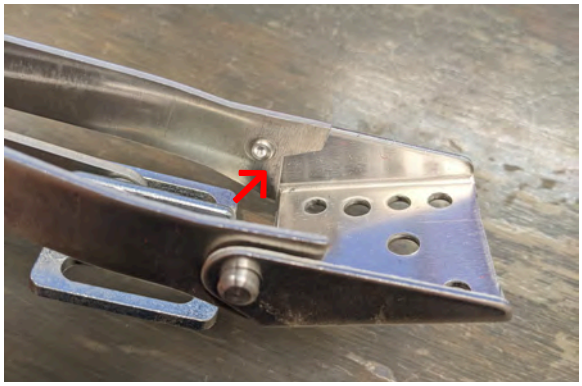
In the correct position, the opener is sitting parallel to the window, which means that it will not demand a lot of pressure from the cylinder when the opening starts. Before fitting a new cylinder to the openers, you must check that the window can open freely right from the start. If not you must change the position of the aluminum profiles.

If you do not want your roof vents to open/close automatically during the wintertime, the red strap included with your kit may be used to hold the roof vents closed. This will prevent wind from blowing the roof vent open. **You will have to disengage the piston entirely**. If the piston is engaged with the red strap attached, the pressure will cause the piston to burst. Unthread the piston from the threaded circle collar to disengage the piston - you may leave the cotter pin in place.
Alternatively, if your greenhouse is unheated, you may wish to disconnect the piston entirely by pulling out the cotter pin. Store your piston in a room temperature environment.

When placing the "quick-release" arms into the sill bracket, be sure that both points are on the same side of the bracket. If they are not, the opener will not move freely when the pressure builds and your piston will burst. This is not covered under warranty. See pictures below.

INCORRECT:

Note that point is OUTSIDE the bracket



CORRECT:

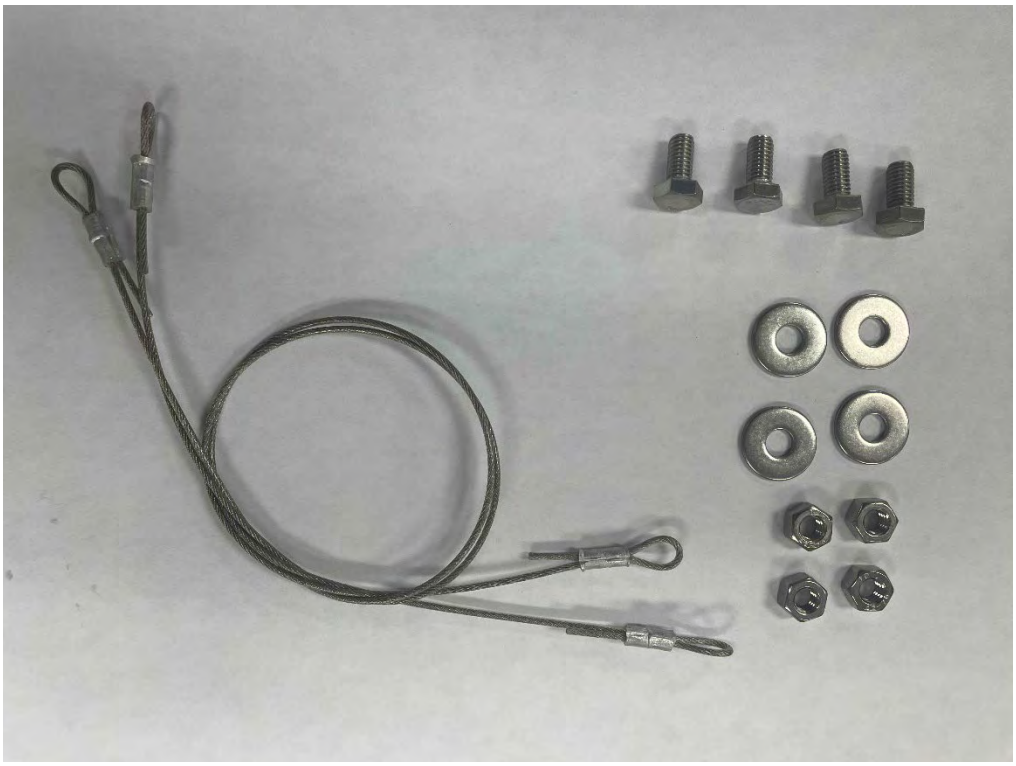
Note that point is INSIDE the bracket

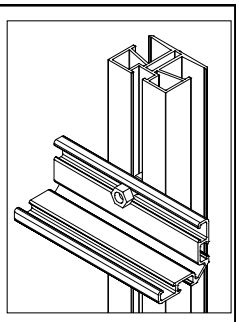
Roof Vent Recommendation for High Wind Areas

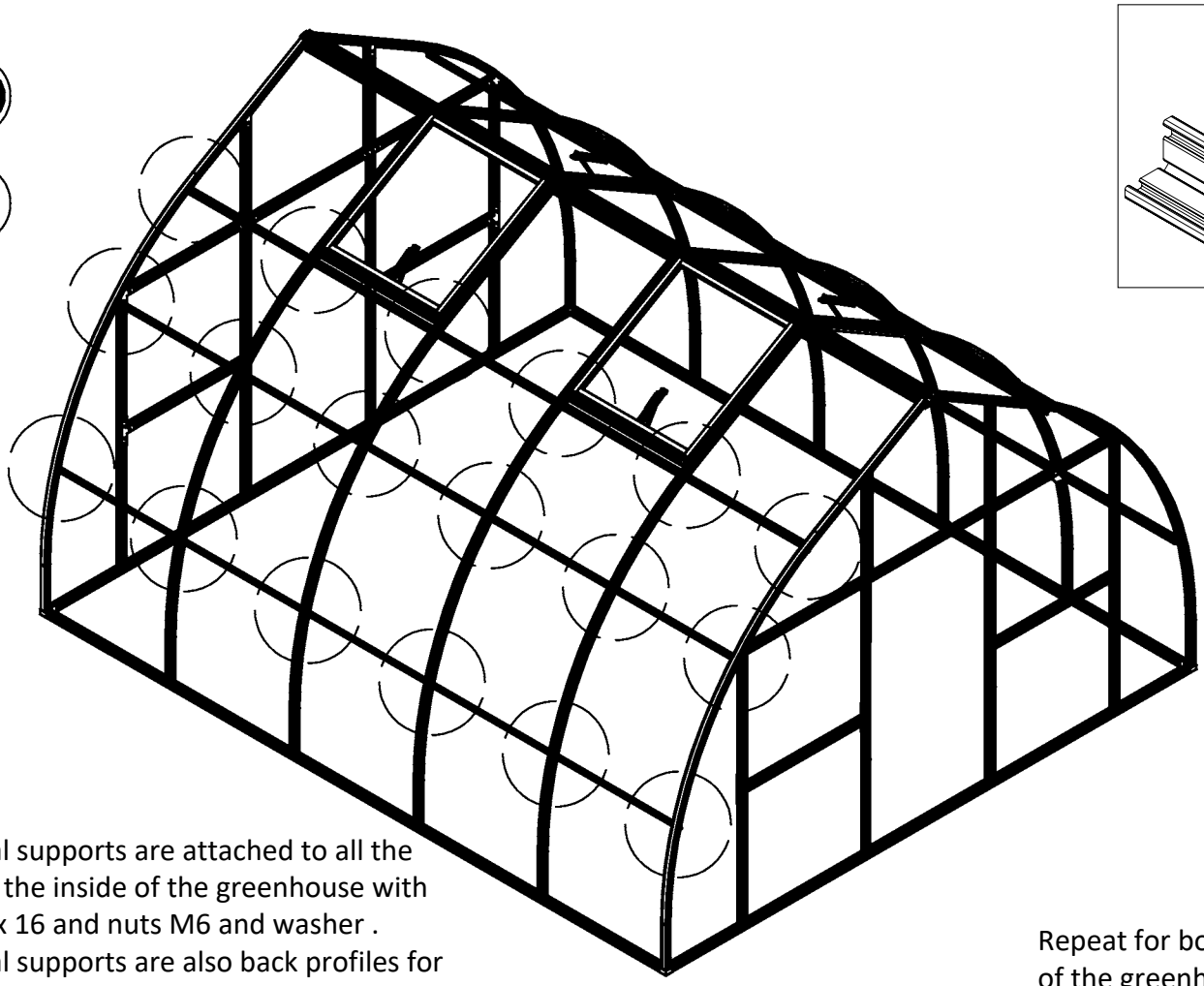
If you get strong wind gusts, we recommend protecting your roof vents and openers with restraint cables. Roof vent restraints can be purchased from Exaco Trading (US distributor of Riga's) or can be made, they are not a standard part from the Riga manufacturer.

Two restraints are used for each window; one on each side of the window. Install each loop on bolts inserted into the channel and top with a washer and nut. Position the restraint as illustrated and adjust as needed to avoid interference from the crossbar as the window is raised and lowered.

You can make your own restraints from 1/16 "stainless wire rope, stranded 7x19 for maximum flexibility. Overall length should be about 16". When installed near the crossbar, they will limit the window opening to less than the safe extents of the hinge and window opener, but greater than the maximum thermal extent of the opener. More important than the exact length of the restraint is a close length match for each window's pair. If you are not equipped to swage the binding sleeves you can use wire rope clamps.

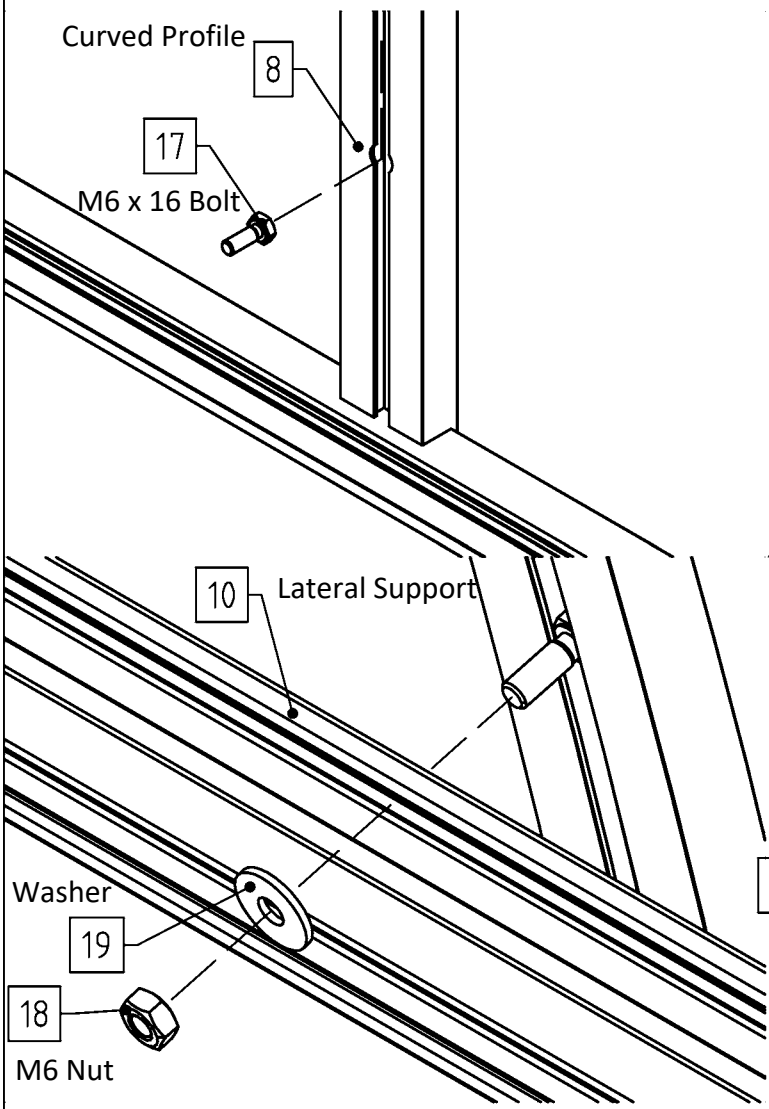


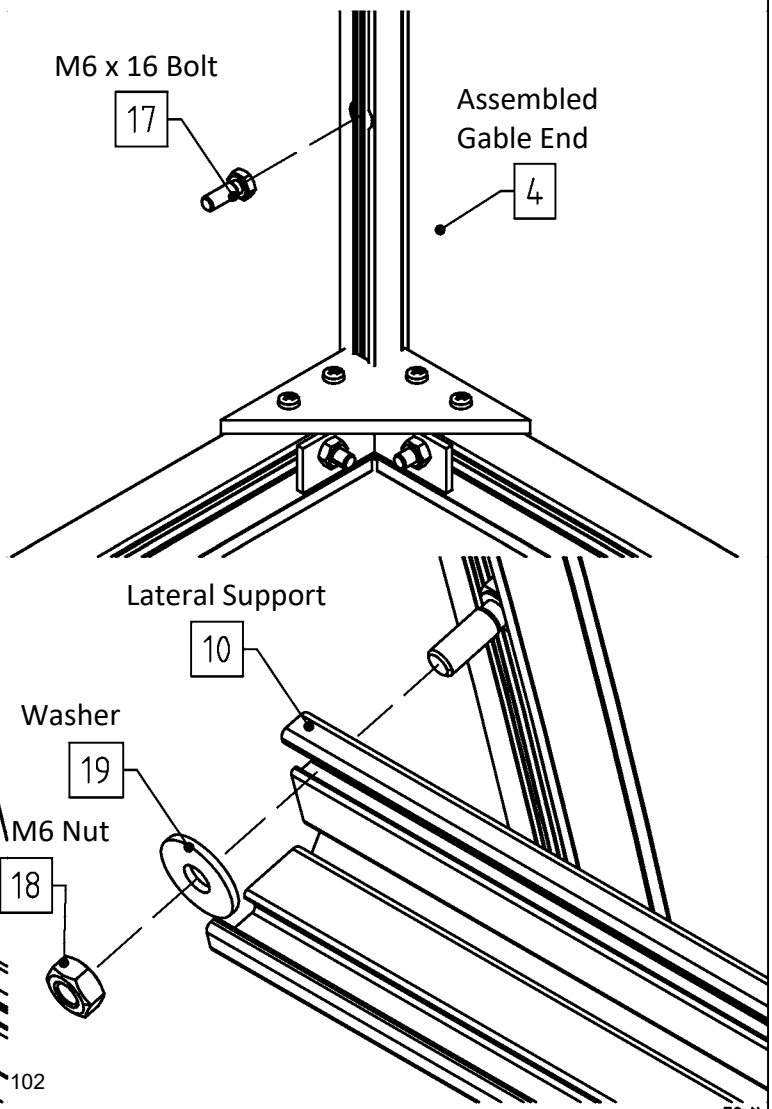




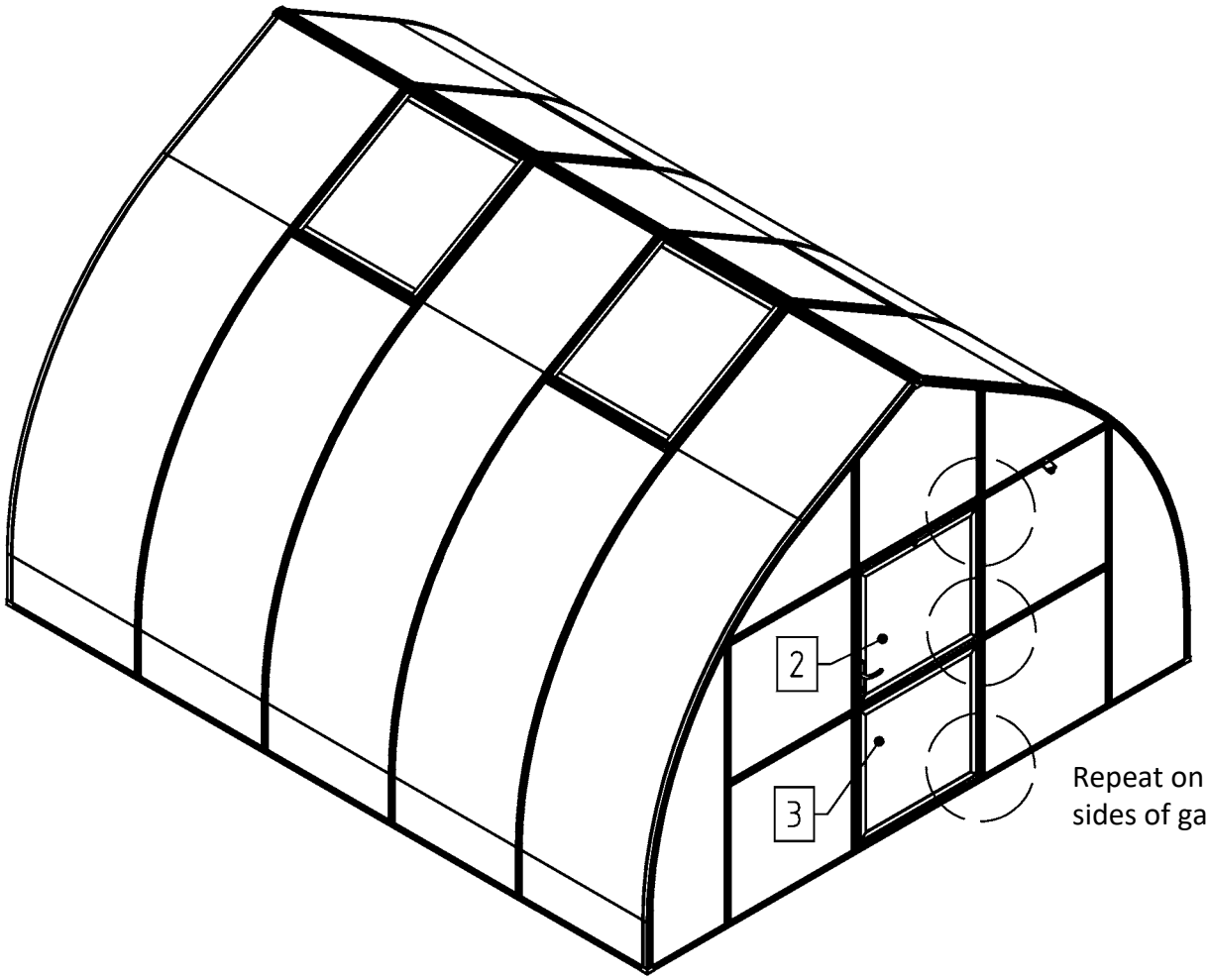
The lateral supports are attached to all the curves on the inside of the greenhouse with bolts M6 x 16 and nuts M6 and washer .
The lateral supports are also back profiles for the optional tables and shelves.

Repeat for both sides of the greenhouse





ZS-N



Repeat on both sides of gable ends

Repeat for both Top/Bottom Doors

4x

2/3

Assembled Top/Bottom Door

4

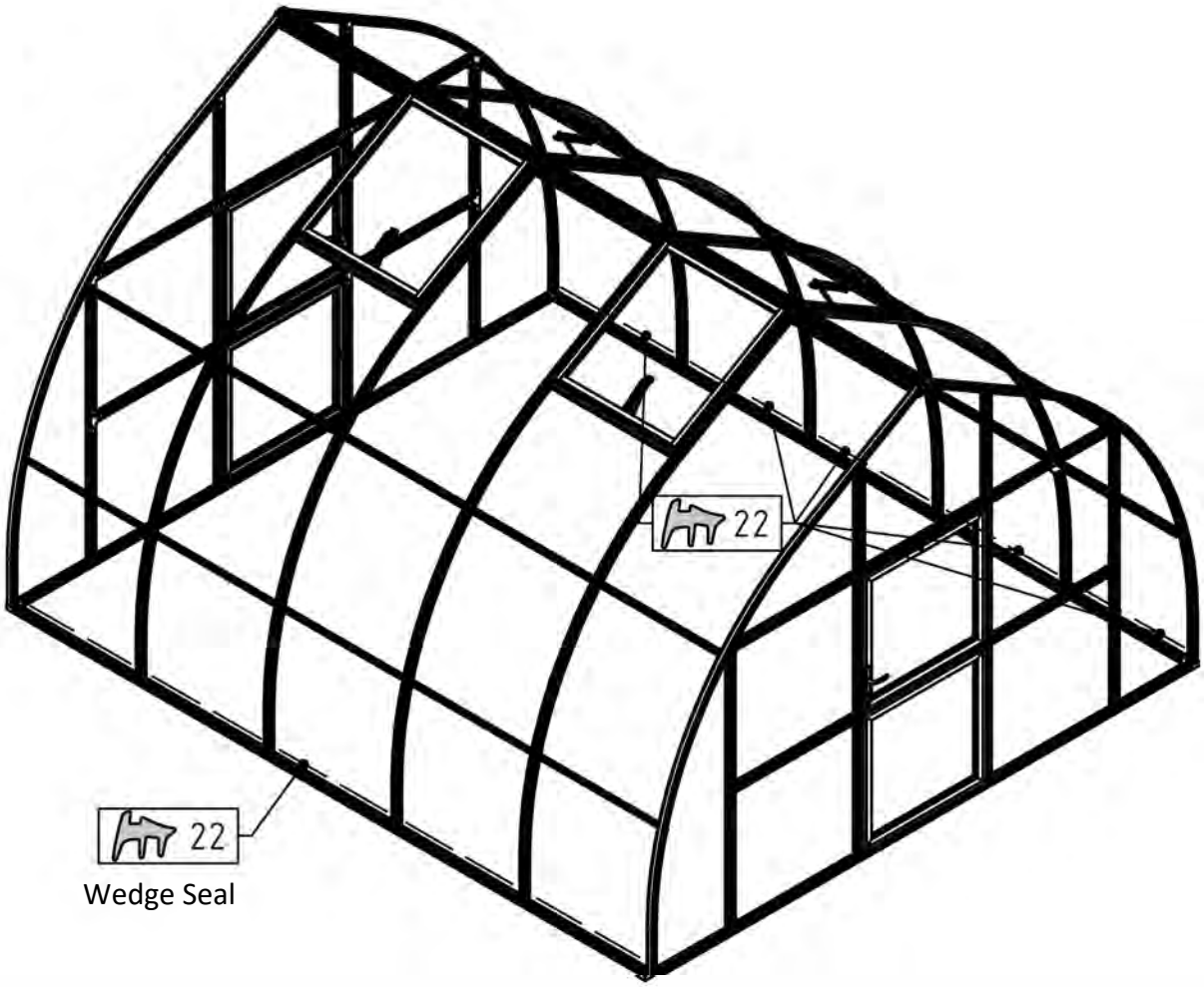
Assembled Gable End

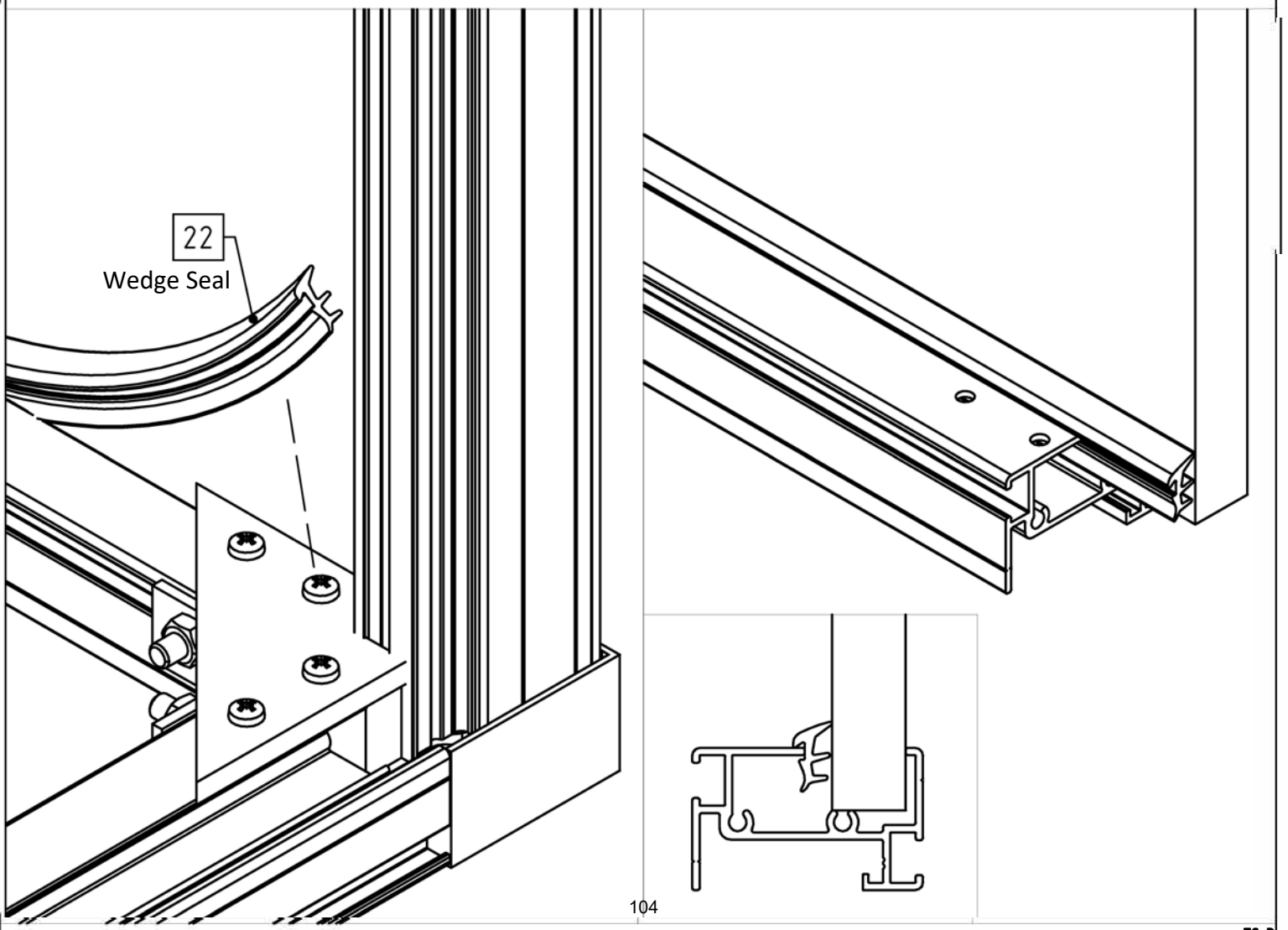
Repeat for both hinges

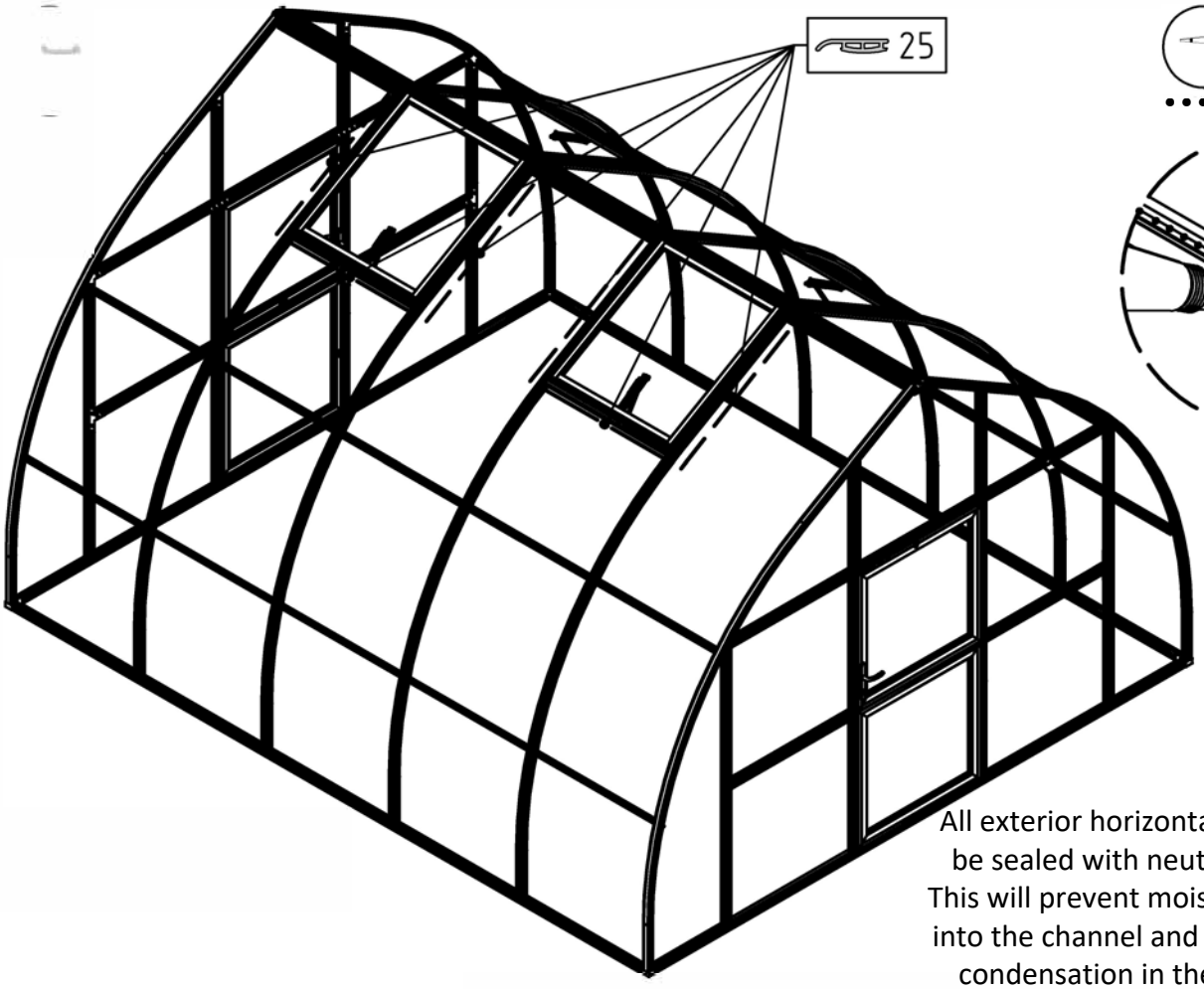
8x

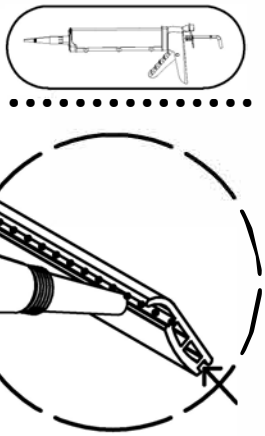
16 Hinge Bolts

ZS-0


22
22
Wedge Seal

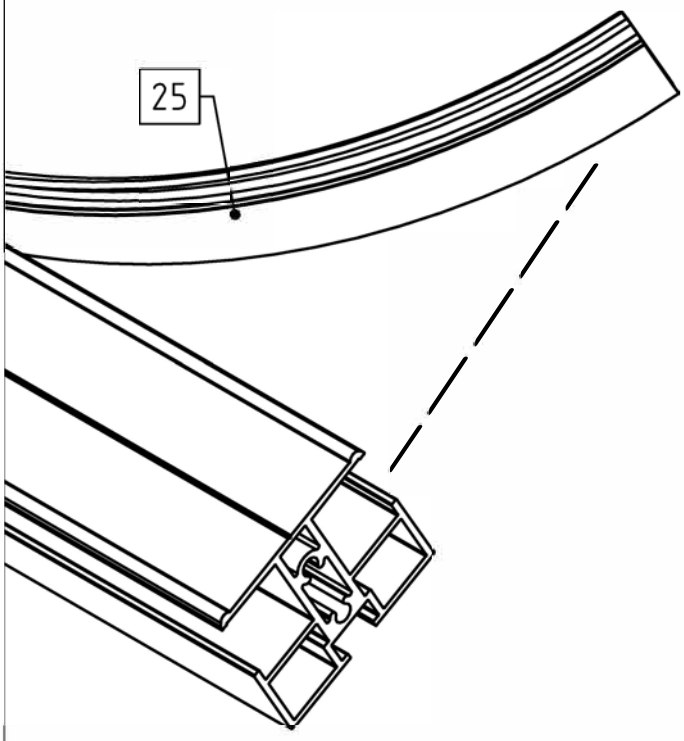

22
Wedge Seal

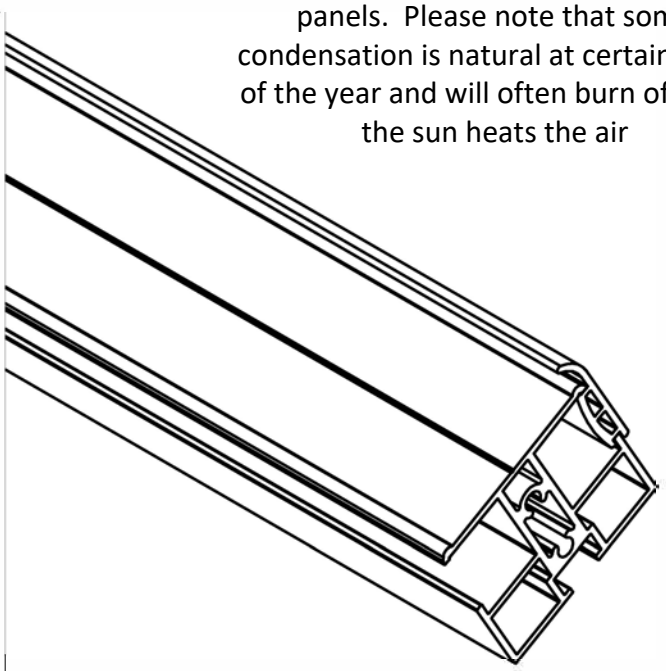


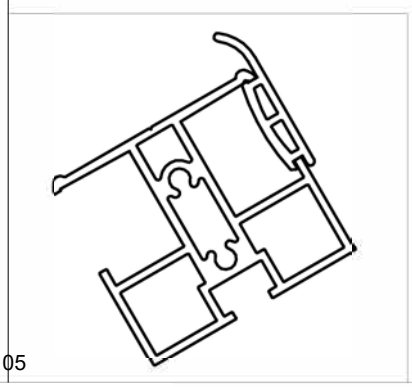


All exterior horizontal surfaces should be sealed with neutral cure silicone. This will prevent moisture from seeping into the channel and prevent excessive condensation in the polycarbonate panels. Please note that some condensation is natural at certain times of the year and will often burn off once the sun heats the air

Repeat for all Roof Windows







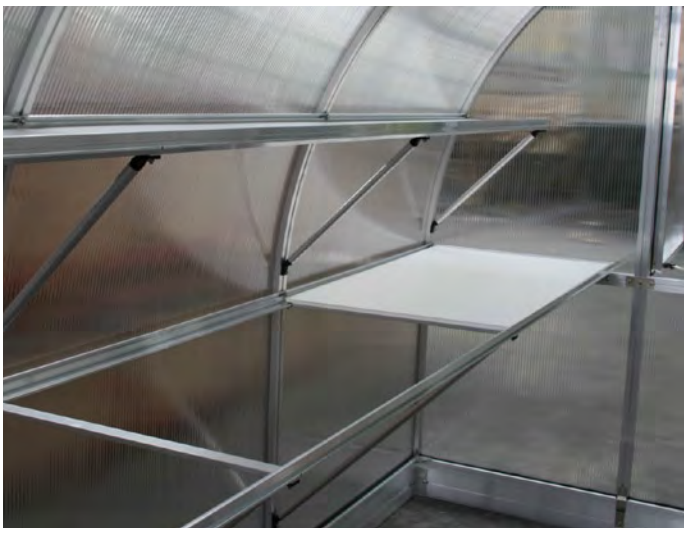
Dichtung in einem Stück umlaufend einziehen!

VD

Optional Accessory - may not be included with your kit.

HOKLARTHERM

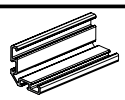
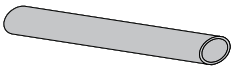
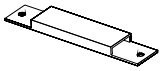
Riga XL Top Shelf



Shelf kit only available for Riga XL 5,6, & 9

Assembly Instructions -Top Shelf

Parts list top shelf:

Description	*pos.*	*overview*	Riga XL 5	Riga XL 6	Riga XL 9
longitudinal profile *may be trimmed to fit if desired*	1		4	4	6
strut - 33.5 inches	3		6	7	10
angle-end tail (narrow)	V36		12	14	22
cross-brace	5		6	7	10
connector with grub screw	V161		6	6	10
hexagonal bolt M6 x 12mm with nut M6	S12/S1		11	11	22
hexagonal bolt M6 x 16mm with nut M6	S5/S1		14	10	22
T-head bolt M6 x 16mm with nut M6	S15/ S1		2	2	2
Allen key	V21		1	1	1
Polycarbonate sheets (shelf surface) *In a separate box*			5	6	9

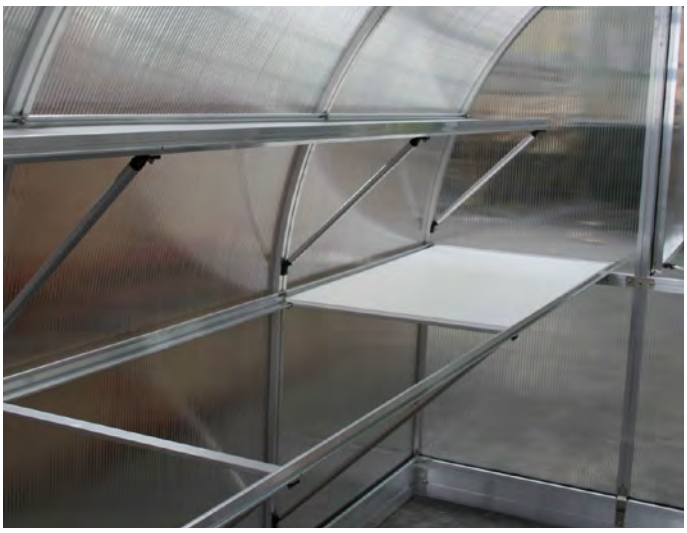
Optional Accessory - may not be included with your kit.

HOKLARTHERM

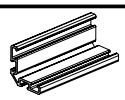
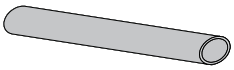
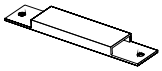
Riga XL Table Shelf

Shelf kit only available for Riga XL 5,6, & 9

Assembly Instructions Table Shelf



Parts list table shelf:

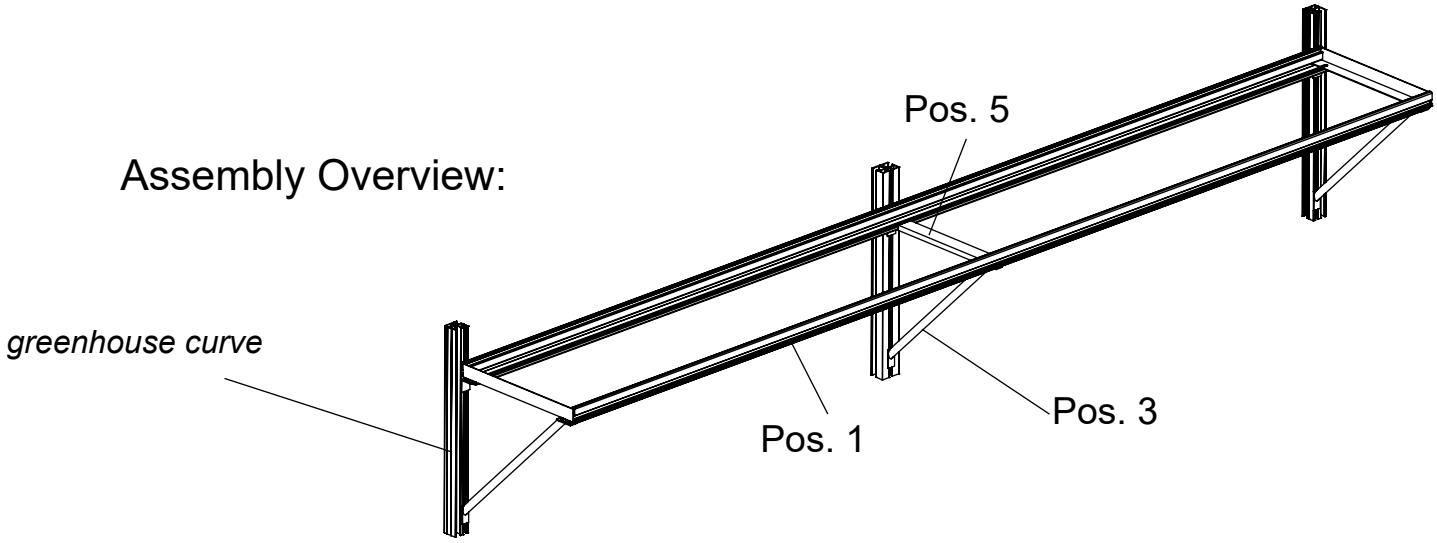
Description	*pos.*	*overview*	Riga XL 5	Riga XL 6	Riga XL 9
longitudinal profile *may be trimmed to fit if desired*	1		4	4	6
strut - 35.5 inches	3		6	7	10
angle-end tail (narrow)	V36		12	14	22
cross-brace	5		6	7	10
connector with grub screw	V161		6	6	10
hexagonal bolt M6 x 12mm with nut M6	S12/S1		11	11	22
hexagonal bolt M6 x 16mm with nut M6	S5/S1		14	10	22
T-head bolt M6 x 16mm with nut M6	S15/ S1		2	2	2
Allen key	V21		1	1	1
Polycarbonate sheets (shelf surface) *In a separate box*			5	6	9

Before beginning step 1 of assembly, take time to prepare your longitudinal profile:

Connect your longitudinal profiles using connectors with grubscrews (may be preinserted into your longitudinal profile).

The sections of longitudinal profiles (pos 1) are connected with connectors with grub screws (V161) as shown to the left. Tighten the set screws/grub screws with included Allen wrench.

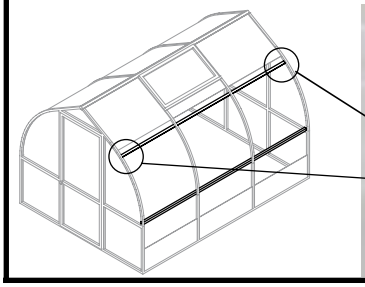
Assembly Overview:

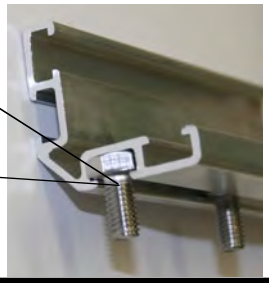


Step 1

Attach an angle-end tail (V36) to each end of the struts (pos. 3). Push in as far as it will possibly go - it is okay if it does not fully insert.

Step 2





Insert one M6 x 12 bolt (S12) per greenhouse curve (including edge curves) into the lower bottom channel of the attached greenhouse lateral support.

Step 3

Insert one M6 x 12 bolt (S12) per curve of greenhouse (including the edge curves) into the lower channel on the bottom of the longitudinal profile (pos.1) of the shelf kit. Tip: Use a strip of tape to keep the bolts from sliding out the end.

Step 4

Attach the cross-braces (pos. 5) to the greenhouse lateral support with inserted bolt and nut and let them hang.

Step 5

Attach crossbrace to front longitudinal profile (from shelf kit) with inserted bolt. Add the strut assembly beneath and tighten with nut. Repeat on all curves.

Step 6

Attach strut to greenhouse curve with bolt (S5) and nut (S1). Tip: Insert bolt (S5) at the insertion point near the bottom of the curve. Please note that the black angle may not match the angle of your greenhouse curve.

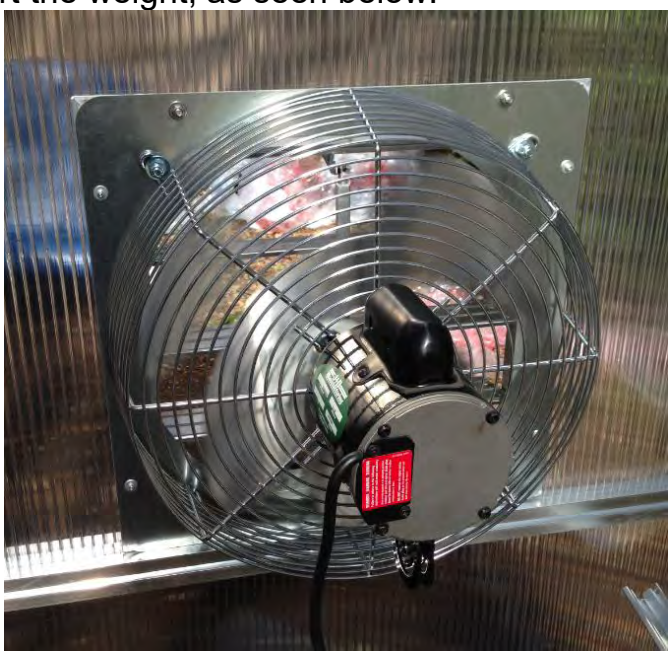
Step 7

Finally, insert the polycarbonate panels

OPTIONAL ACCESSORY: Exhaust Fan installation for RIGA XL, RIGA 4 & RIGA 5

If you have both an intake shutter vent and exhaust fan, you will want them to be opposite/diagonal from each other to get the best cross-breeze. Plug the fan into the thermostat (optional) to control when it turns on. If you are using both a shutter vent and an exhaust fan you will need to purchase a plug splitter and plug them both into the thermostat.

For a Riga 4 & 5, we recommend placing the exhaust fan next to rear wall window by placing the unit on top of the cross bar to support the weight, as seen below.

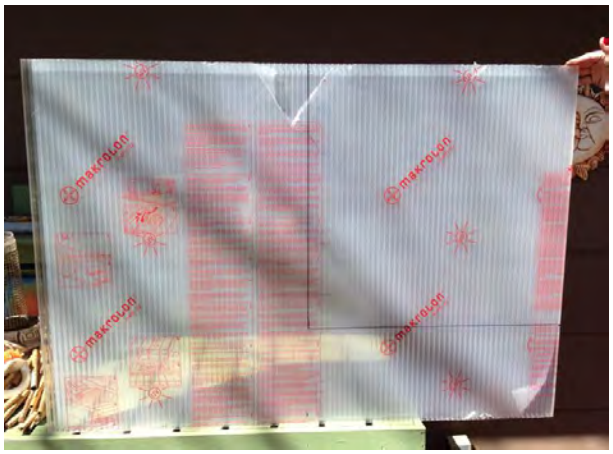


For the Riga XL the best placement is above the rear wall door with the weight on the door frame as seen to the left.

You may cut the hole in the polycarbonate before or after assembly of the greenhouse. Draw the outline of hole to be cut (only the area protruding from the polycarbonate). Drill a hole in each corner of the panel to insert a fine-tooth jigsaw blade and cut along the lines. Insert the fan. Drill holes in polycarbonate through the holes in the flange of the fan and hold in place with bolts – use washers on the outside. Once installed, we recommend caulking on the outside with neutral cure silicone caulk such as Boss 399.

OPTIONAL ACCESSORY: Intake Shutter Vent Installation for RIGA XL, RIGA 4 & 5

You will want your intake shutter vent to be opposite from your exhaust fan (i.e. opposite wall and lower part of the greenhouse) to get the best cross-breeze. They should both be plugged into the thermostat with a plug splitter to engage them simultaneously.



We recommend cutting a hole in the polycarbonate to bolt the intake shutter vent to the horizontal bar next to the front door. Measure the protruding dimensions and cut the appropriate size hole in the polycarbonate. You may cut this hole before installing the polycarbonate (see note to the right). If your greenhouse is assembled, the best way is to drill a hole in each of the corners of the section to be removed, then insert a jigsaw (fine tooth blade) to cut along your marked lines (note: if you use this method, your measurement will be different than the ones to the right).

To cut the hole before installing the polycarbonate, you may use the following measurements as shown above:

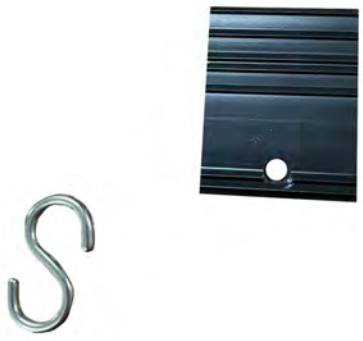
- *Riga 4: 16.75"w x 16.5" h*
- *Riga 5: 20.75" w x 20.5"h*

Step 2: Bolt the “heavy/thick” L-bracket which comes with the vent to the galvanized steel “T-bracket” supplied by us, screw (self-tapping screws) the T-bracket to the bottom of the vent and cross bar (slightly off center). You may want to drill small pilot holes. Attach the “motor” to the “L-bracket” with the 4 black screws. Then follow the instructions provided with the vent. Attach the spring (only 1 is needed) to pull the vent closed at the top in a small hole drilled in the top flange. We have found that it is best to hook the chain over the top of the center bar to pull the vent open. We recommend sealing with a neutral cure silicone caulk (such as Boss 399) on the outside of the greenhouse.

Riga Metal Hook Assembly

Riga Plastic Hook Assembly

1.



2.

3.

Pinch the top of the plastic hook and slide it into the ridge beam or the curve beams. Plastic hooks are designed for supporting plants/ growing wire - or other lightweight items.

Notes:

Customer Service or
Assembly Questions?

Give us a call
Toll free: 1-877-760-8500
customerservice@exaco.com
Exaco Trading
www.EXACO.com

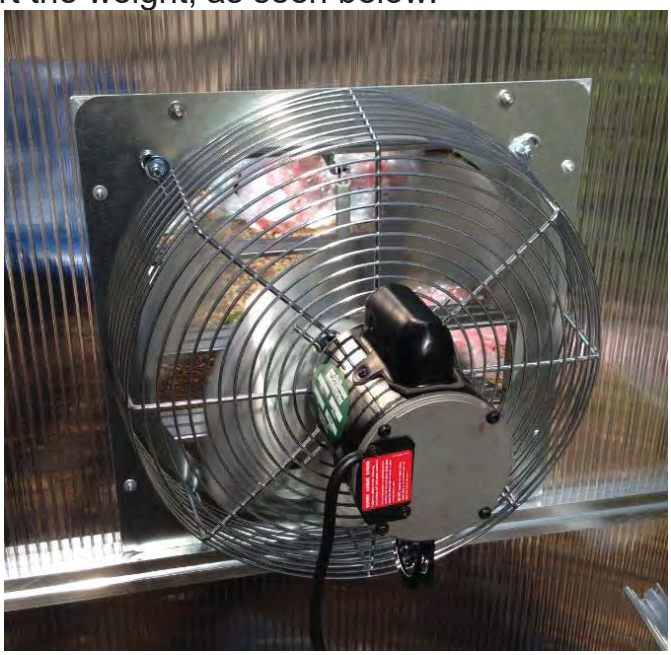
Please find helpful assembly videos on our Exaco Trading Co YouTube Channel - Riga XL PLAYLIST.
Find the link at www.exaco.com or scan the QR code below.

Optional Accessory!

Exhaust Fan installation for RIGA XL, RIGA 4 & RIGA 5

If you have both an intake shutter vent and exhaust fan, you will want them to be opposite/diagonal from each other to get the best cross-breeze. Plug the fan into the thermostat (optional) to control when it turns on. If you are using both a shutter vent and an exhaust fan you will need to purchase a plug splitter and plug them both into the thermostat.

For a Riga 4 & 5, we recommend placing the exhaust fan next to rear wall window by placing the unit on top of the cross bar to support the weight, as seen below.



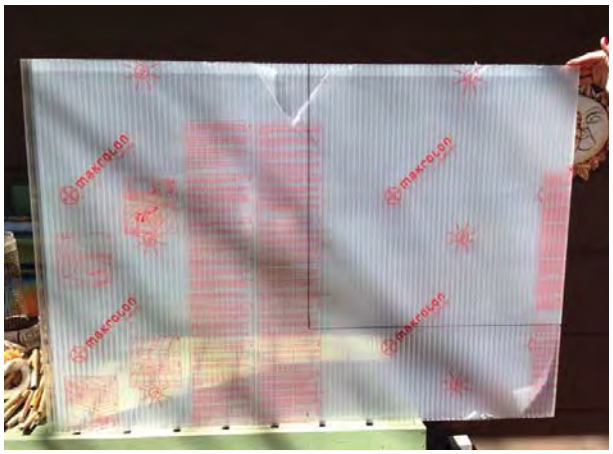
For the Riga XL the best placement is above the rear wall door with the weight on the door frame as seen to the left.

You may cut the hole in the polycarbonate before or after assembly of the greenhouse. Draw the outline of hole to be cut (only the area protruding from the polycarbonate). Drill a hole in each corner of the panel to insert a fine-tooth jigsaw blade and cut along the lines. Insert the fan. Drill holes in polycarbonate through the holes in the flange of the fan and hold in place with bolts – use washers on the outside. Once installed, we recommend caulking on the outside with neutral cure silicone caulk such as Boss 399.

Optional Accessory!

Intake Shutter Vent Installation for RIGA XL, RIGA 4 & RIGA 5

You will want your intake shutter vent to be opposite from your exhaust fan (i.e. opposite wall and lower part of the greenhouse) to get the best cross-breeze. They should both be plugged into the thermostat with a plug splitter to engage them simultaneously.



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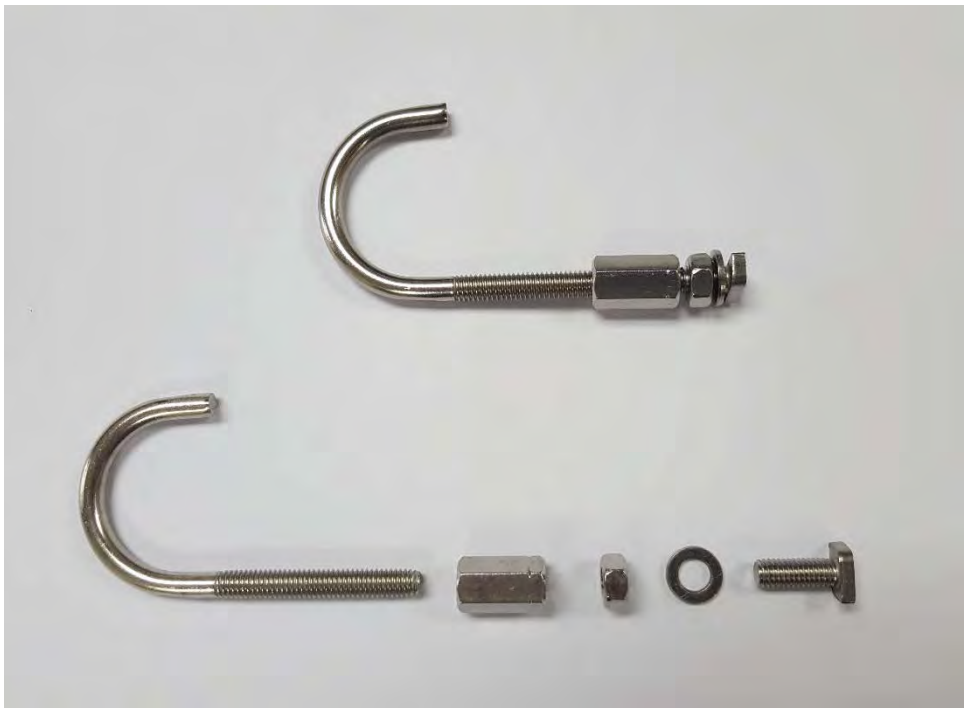
To cut the hole before installing the polycarbonate, you may use the following measurements as shown above:

- *Riga 4: 16.75"w x 16.5" h*
- *Riga 5: 20.75" w x 20.5"h*

Step 2: Attach the “motor” to the “L-bracket” with the 4 black screws. Then, attach the “heavy/thick” L-bracket to the soil profile of the greenhouse with self-tapping screws. You may want to drill small pilot holes. Then follow the instructions provided with the vent. Attach the spring (only 1 is needed) to pull the vent closed at the top in a small hole drilled in the top flange. We have found that it is best to hook the chain over the top of the center bar to pull the vent open. Be sure the started position of the motor arm is in a 12 o'clock position. We recommend sealing with a neutral cure silicone caulk (such as Boss 399) on the outside of the greenhouse.

OPTIONAL ACCESSORY: Riga Metal Hook Assembly



Notes:

Notes:

Customer Service or
Assembly Questions?

Give us a call
Toll free: 1-877-760-8500
customerservice@exaco.com
Exaco Trading
www.EXACO.com

Please watch our animated assembly video on our Exaco Trading Co YouTube Channel.
Find the link at www.exaco.com