HOKLARTHERM

Aluminum and Polycarbonate Greenhouse

Riga S/Riga L Assembly Manual

Applies to 2025 models of: Riga 2s, Riga 3, Riga 3s, Riga 4, Riga 4s, Riga 5

Subject to technical changes!

Version 1.2025

Riga S
Width 2.32m / 7ft 8in

Riga L
Width 2.96m / 9ft 8in

EXACO™

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

Assembly Animation Video is available on our YouTube page, find the link at www.exaco.com or scan the QR code below:

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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 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 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. One should at all times pay attention to the local building regulations.

The Riga 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 you should receive. Check all the outer boxes 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.
- 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 Greenhouse

Components of Greenhouse Structure

- **Door:** All Riga S and Riga L greenhouses have <u>one</u> door on the front of the greenhouse split in a top door and bottom door.
- **Rear Gable window:** Each greenhouse has one rear gable window
- **Roof vents vary by model:**
    - Riga 2s, 3, and 3s models have one roof vent
    - Riga 4s and 4 have two roof vents
    - Riga 5 has 4 roof vents

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 and geothermal heat can be found on many garden blogs.

Building your Riga 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 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. It is dangerous to leave a greenhouse partially assembled. 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.
- 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.

Foundation –

- The optional Riga 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 C-shaped extrusion that connects to the soil profile of your Riga greenhouse before building begins. To anchor the greenhouse, you would dig a 4-5” deep trench on the exterior measurements of the

greenhouse. Check the trench is level and square and then proceed with assembly. At the end of the assembly, finish by filling the trench 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 not 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 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.
- 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)
- Level
- Screwdrivers (Phillips and Flathead)
- Drill + bits
- Impact driver and 1/2" drill bit (useful to notch channel to insert missed bolts)
- Rubber Mallet
- Scissors (to cut the rubber)
- Stable Ladder/s at least 6' tall depending on the height of your greenhouse.
- 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.

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
- Lower Door
- Rear Wall window
- 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, 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 video 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.

- If you forget to add a bolt where one is needed, the black ends of the curves and vertical pieces on the gables have bolt insertion points. You may also create an insertion point in the channel with a ½" drill bit and an impact driver. If possible, do it in a place that will be covered by the piece you will be attaching. We do also have hammerhead/T bolts available for purchase that may be added later – we do not recommend T bolts for structural components.
- 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.

Refer to the Exaco YouTube Playlist for the Riga 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

- Heavy Duty Planter boxes
- Metal plant hooks
- T bolts to insert in greenhouse channels
- 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:

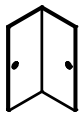
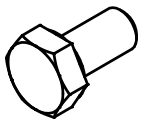
- **WINTER/SNOW/ICE CONSIDERATIONS:** Please take the proper precautions to protect your investment from heavy snow.
    - The roof should be cleared of heavy snow when possible, this removes weight from the roof and also allows the sun to shine in and heat your greenhouse
    - Heating your greenhouse 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.
- Polycarbonate Maintenance (see next section for important information about polycarbonate)
    - 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?
Please call Exaco at 877-760-8500 or email customerservice@exaco.com.

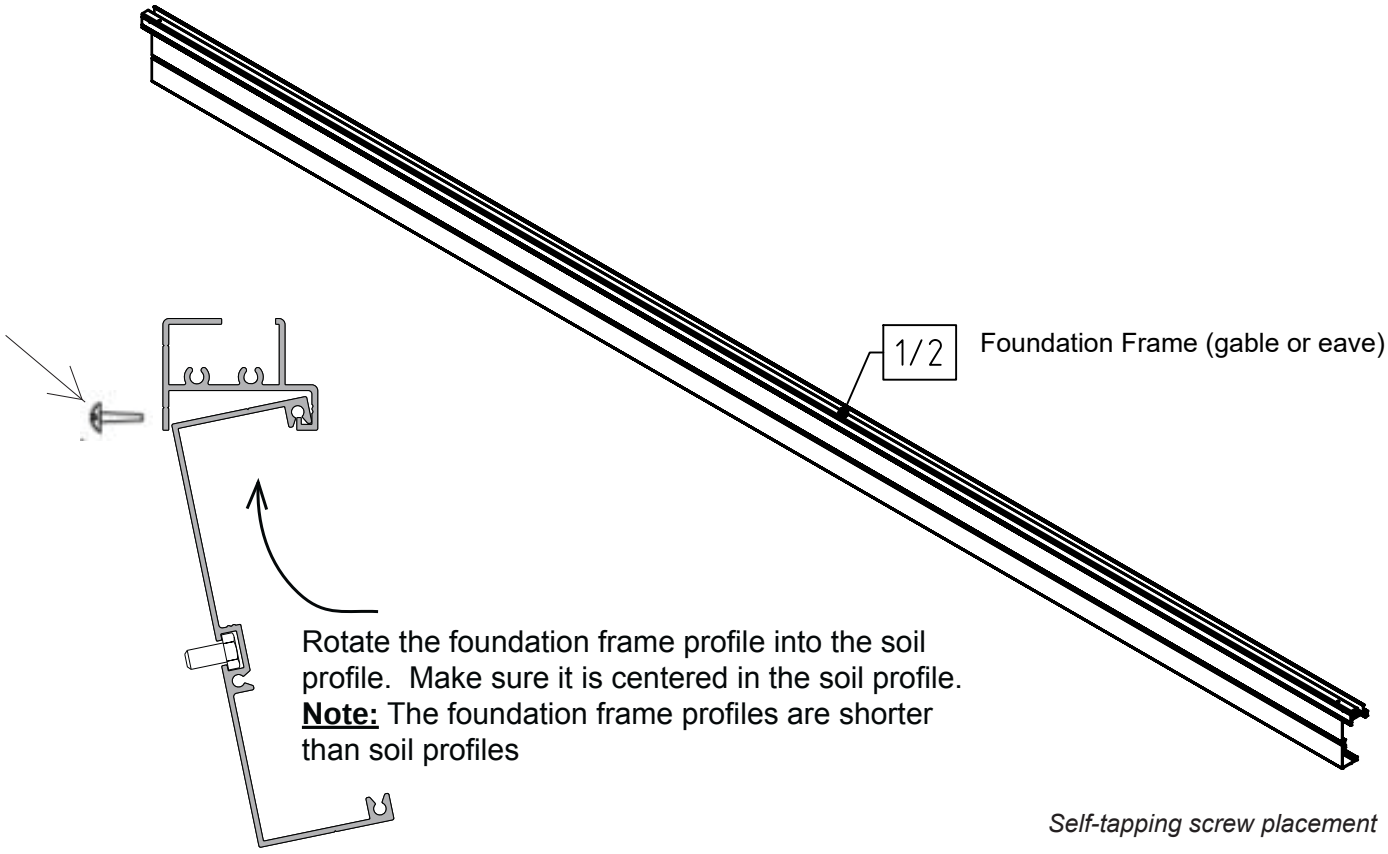
Optional Foundation Frame Assembly

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

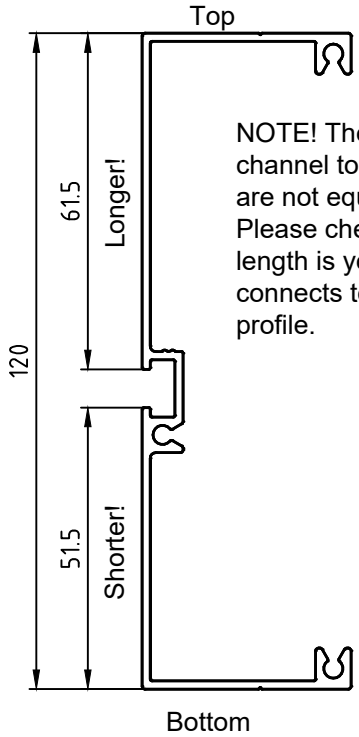
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P083–01–01–00–00–1 P083–02–01–00–00–1	Foundation Frame (gable)	2	RIGA S: 2188 mm 86 1/8" RIGA L: 2825 mm 111 1/4"
2		P083–03–01–00–00–1 P083–04–01–00–00–1 P083–05–01–00–00–1 P083–29–01–00–00–1	Foundation Frame (eaves/sides)	2	II: 2022 mm/ 79 5/8" III: 3080 mm/ 121 1/4" IV: 4138 mm/ 162 15/16" V: 5196 mm/ 204 9/16"
3		9999000078	Corner connector for foundation frame	4	
4		9999000267	Mounting bracket for foundation frame	Typ II–IV: 10 Typ V: 12	
5		9999000124	Bolt M6 x 12mm	Typ II–IV: 28 Typ V: 32	DIN 933
6		9999000128	Nut M6	Typ II–IV: 28 Typ V: 32	DIN 934
7					
8					
9					
10					
11					
12					

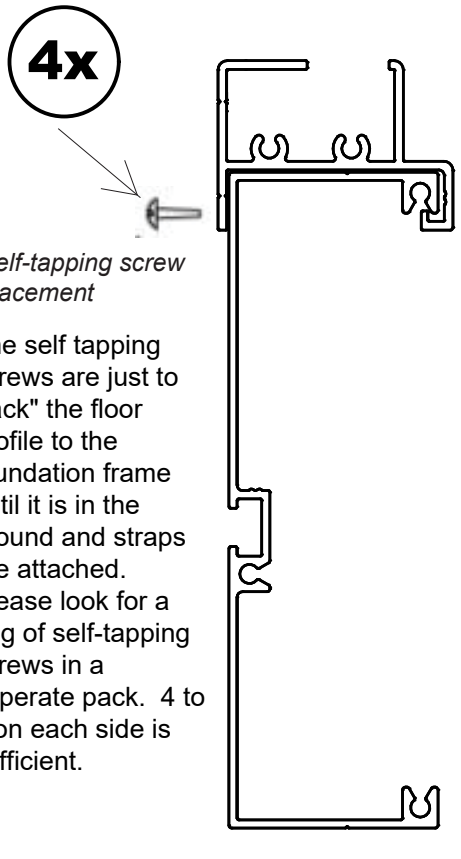
If the optional foundation frame is being used, it will need to be connected to all the floor/soil profiles before beginning assembly of the gables or eaves (sides).



Self-tapping screw placement



NOTE! The lengths from the channel to the top or bottom are not equal!
Please check the longer length is your top portion that connects to the floor/soil profile.



Self-tapping screw placement

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. 4 to 5 on each side is sufficient.

STOP! If you are using the optional Riga foundation frame, you will need to dig a 4-5" deep trench to the dimensions of the greenhouse!

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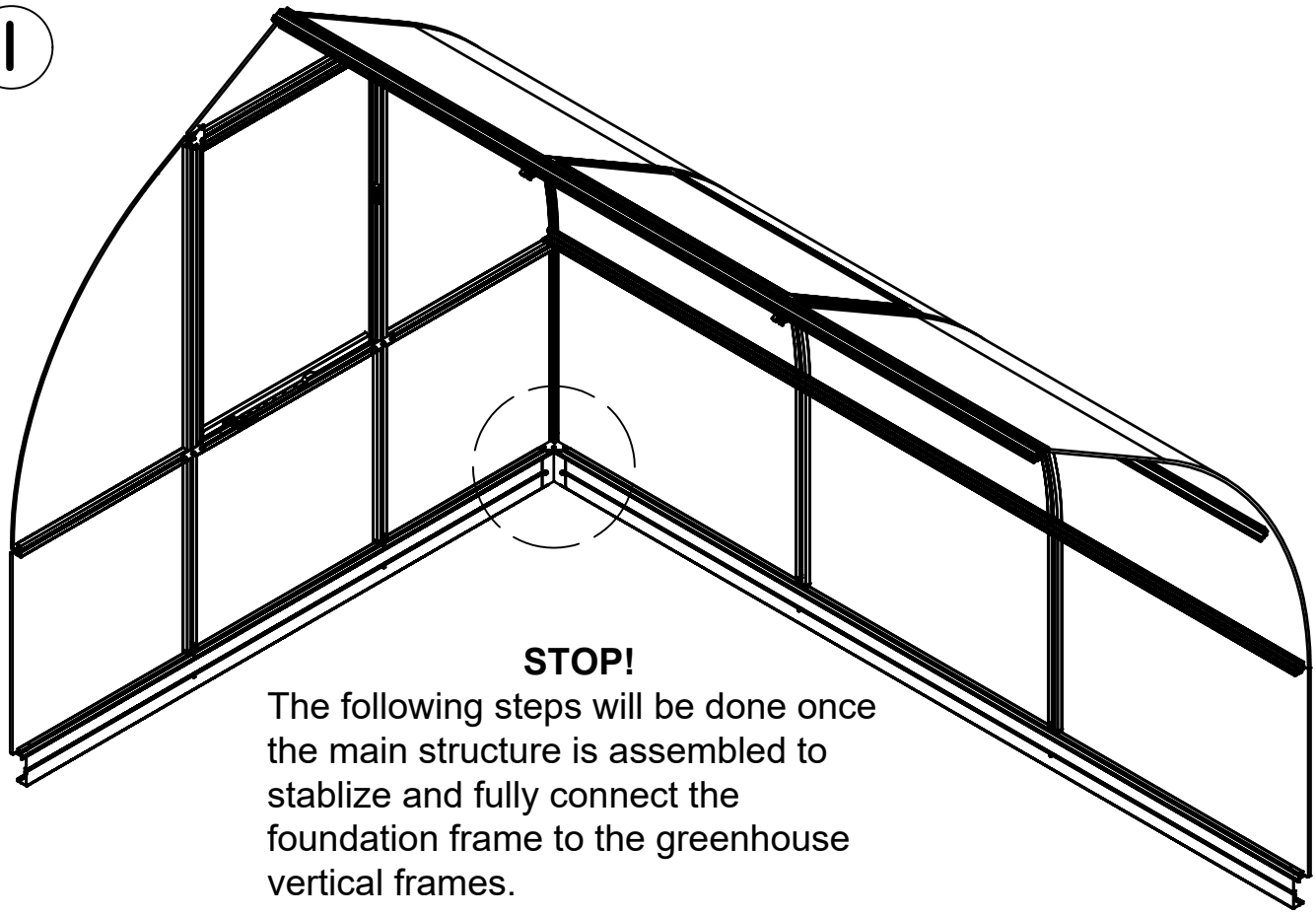
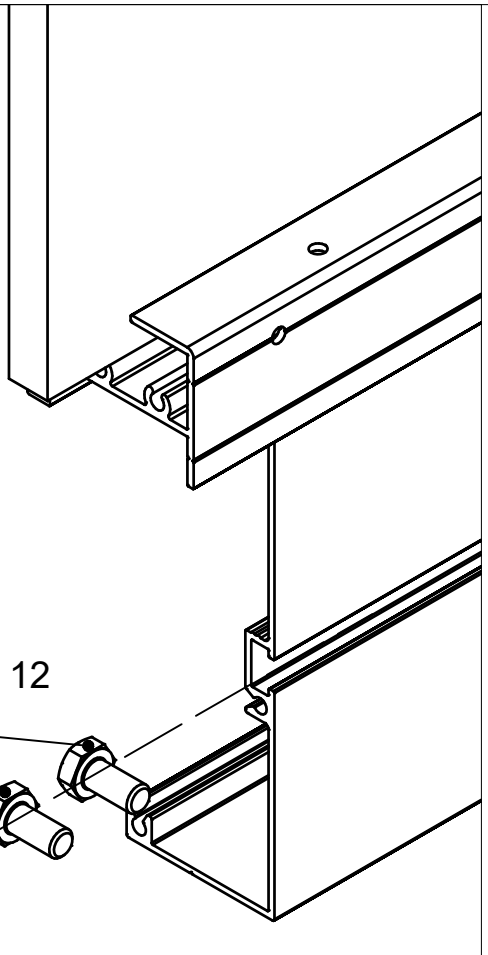


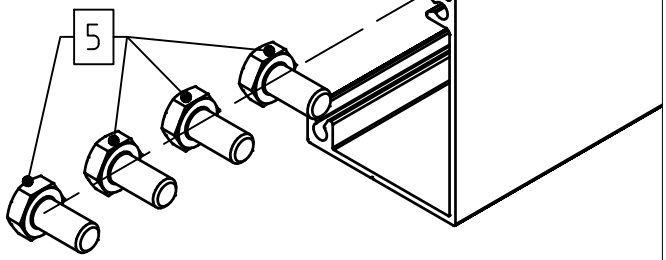
STOP!

The following steps will be done once the main structure is assembled to stablize and fully connect the foundation frame to the greenhouse vertical frames.

2x



Bolts M6 x 12



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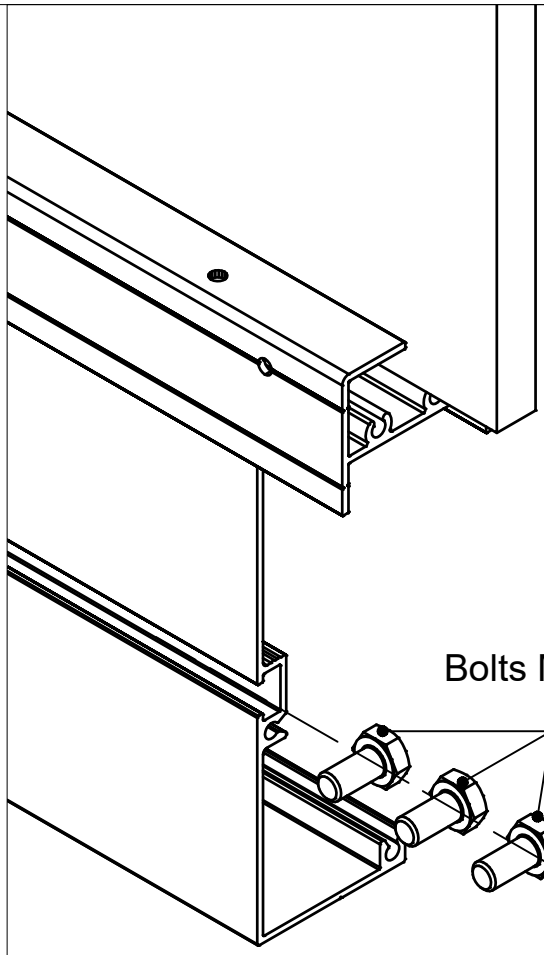
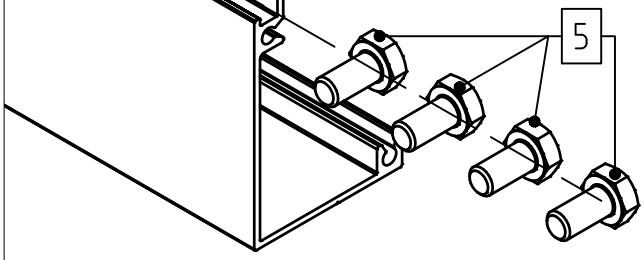
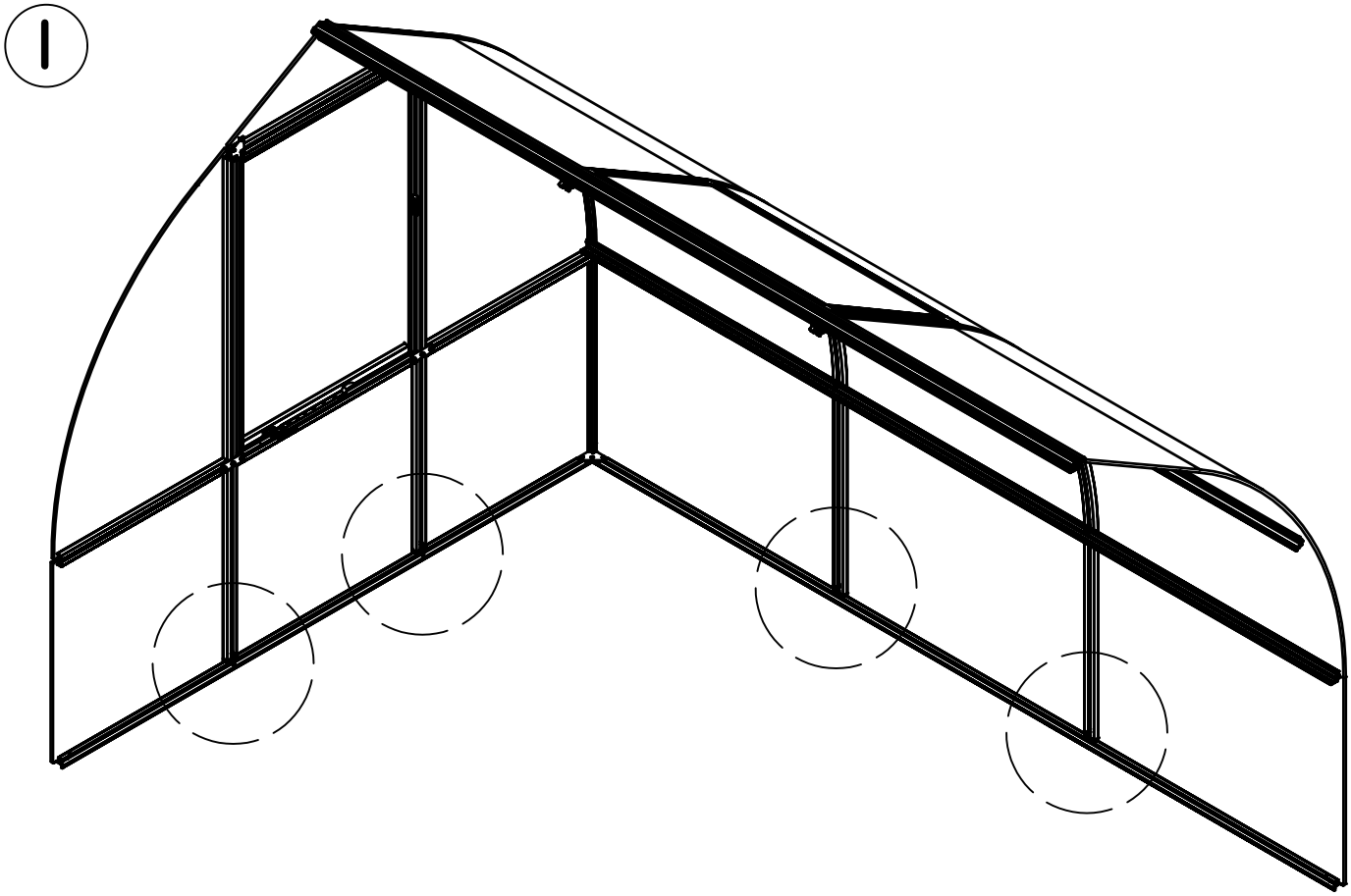


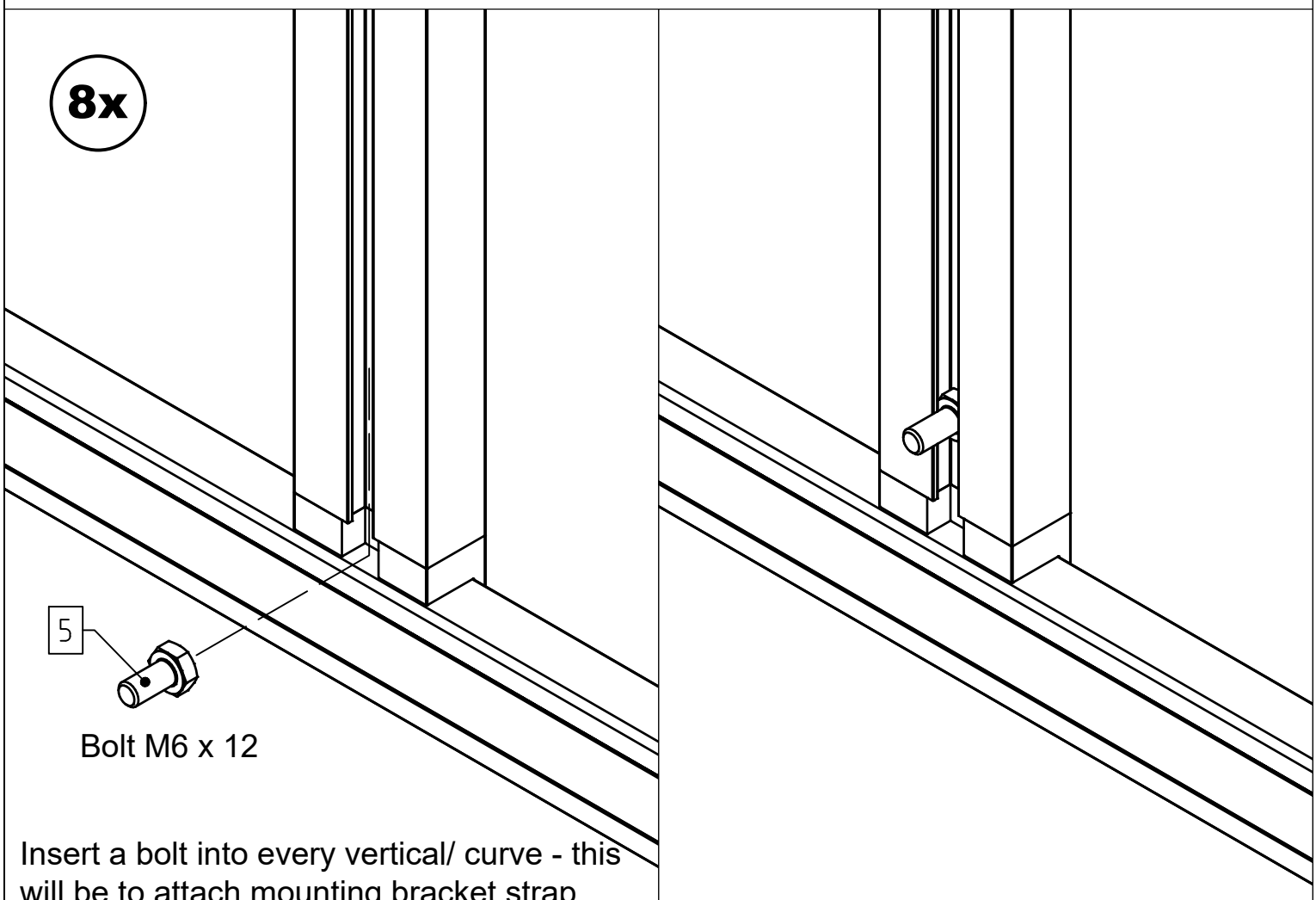
Bolts M6 x 12



Insert bolts into channel of each foudation frame.



8x



Bolt M6 x 12

Insert a bolt into every vertical/ curve - this will be to attach mounting bracket strap.

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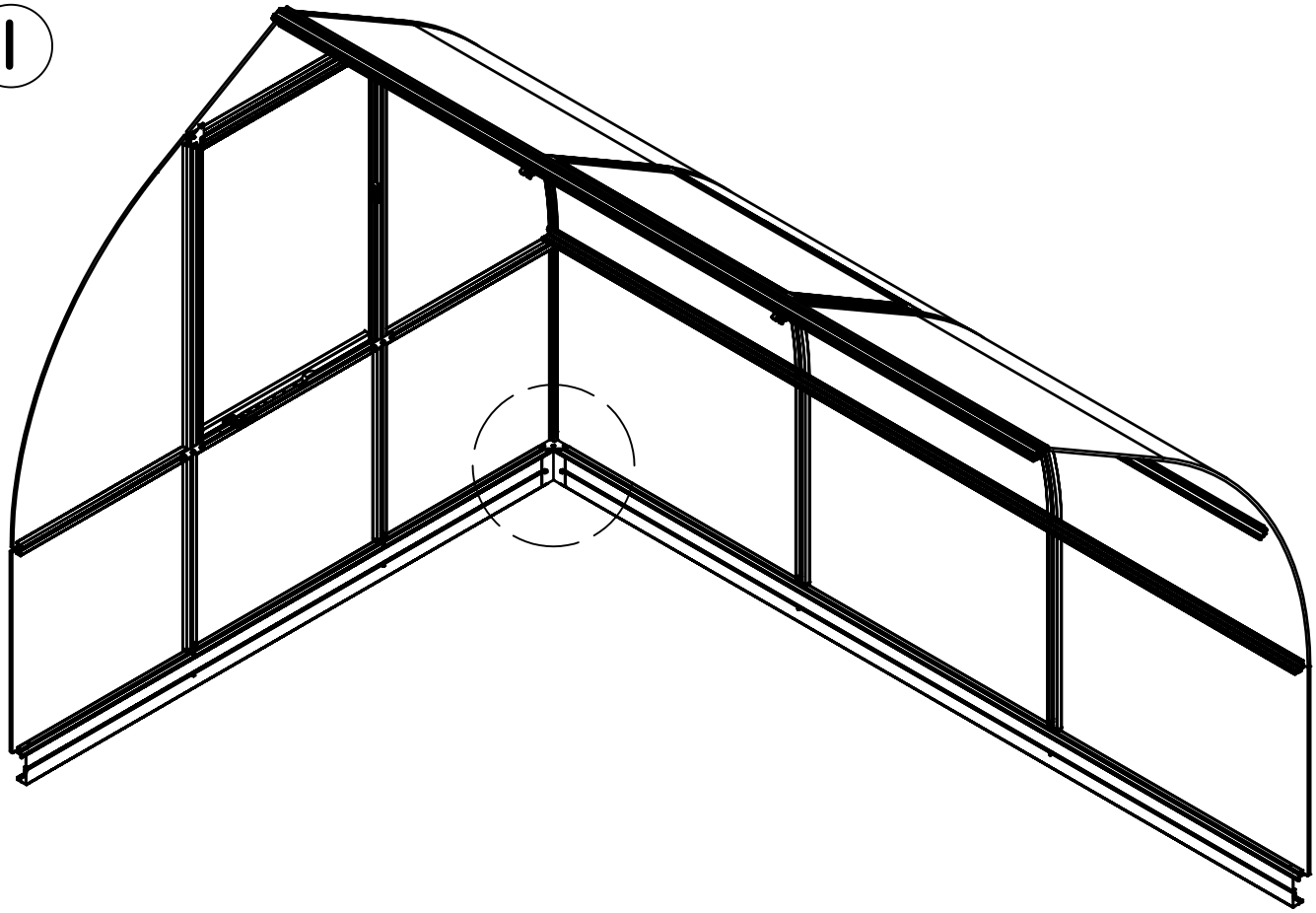
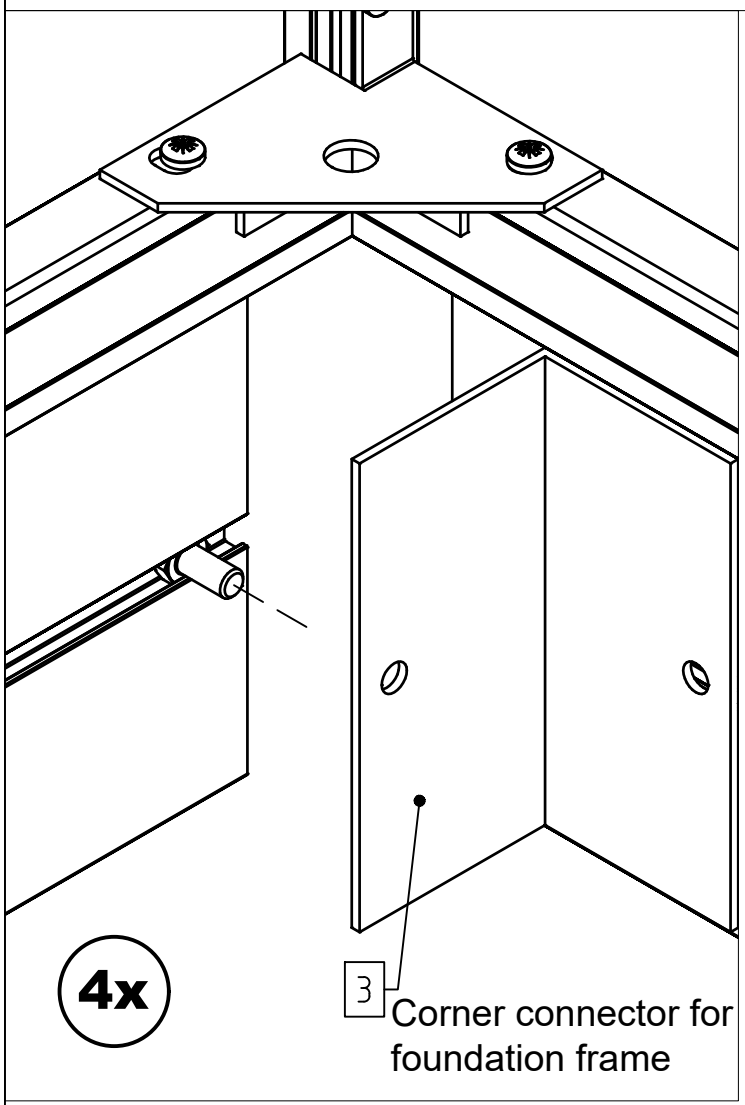
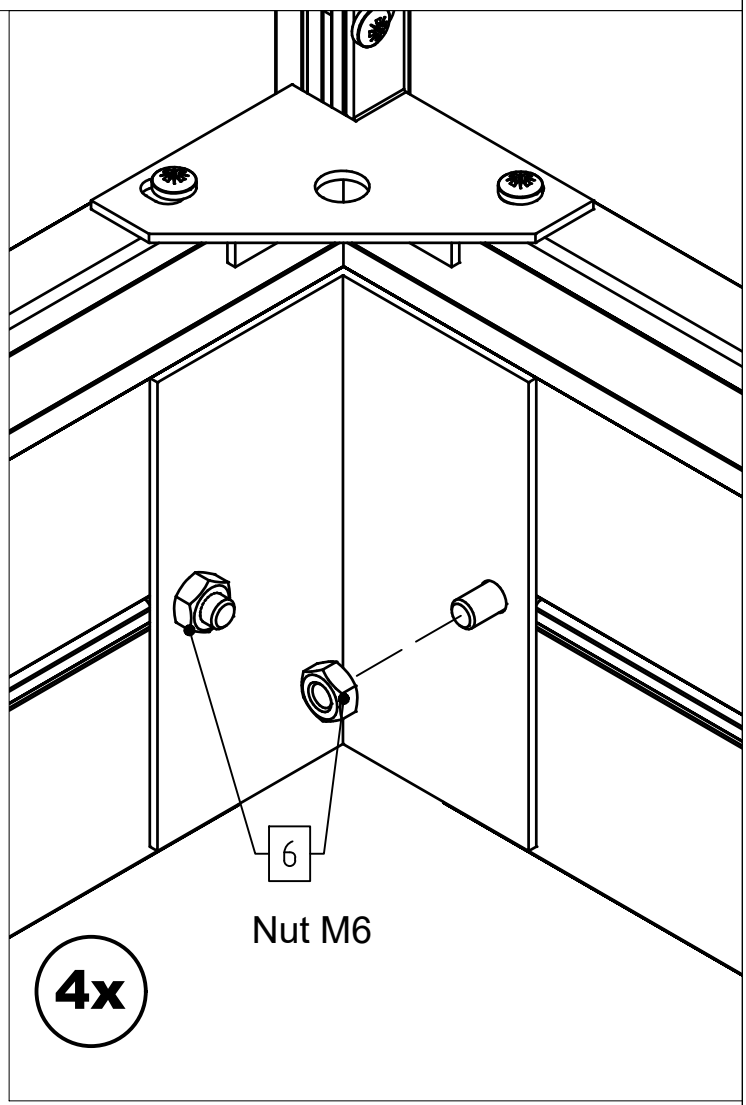




4x

3 Corner connector for foundation frame



4x

6 Nut M6

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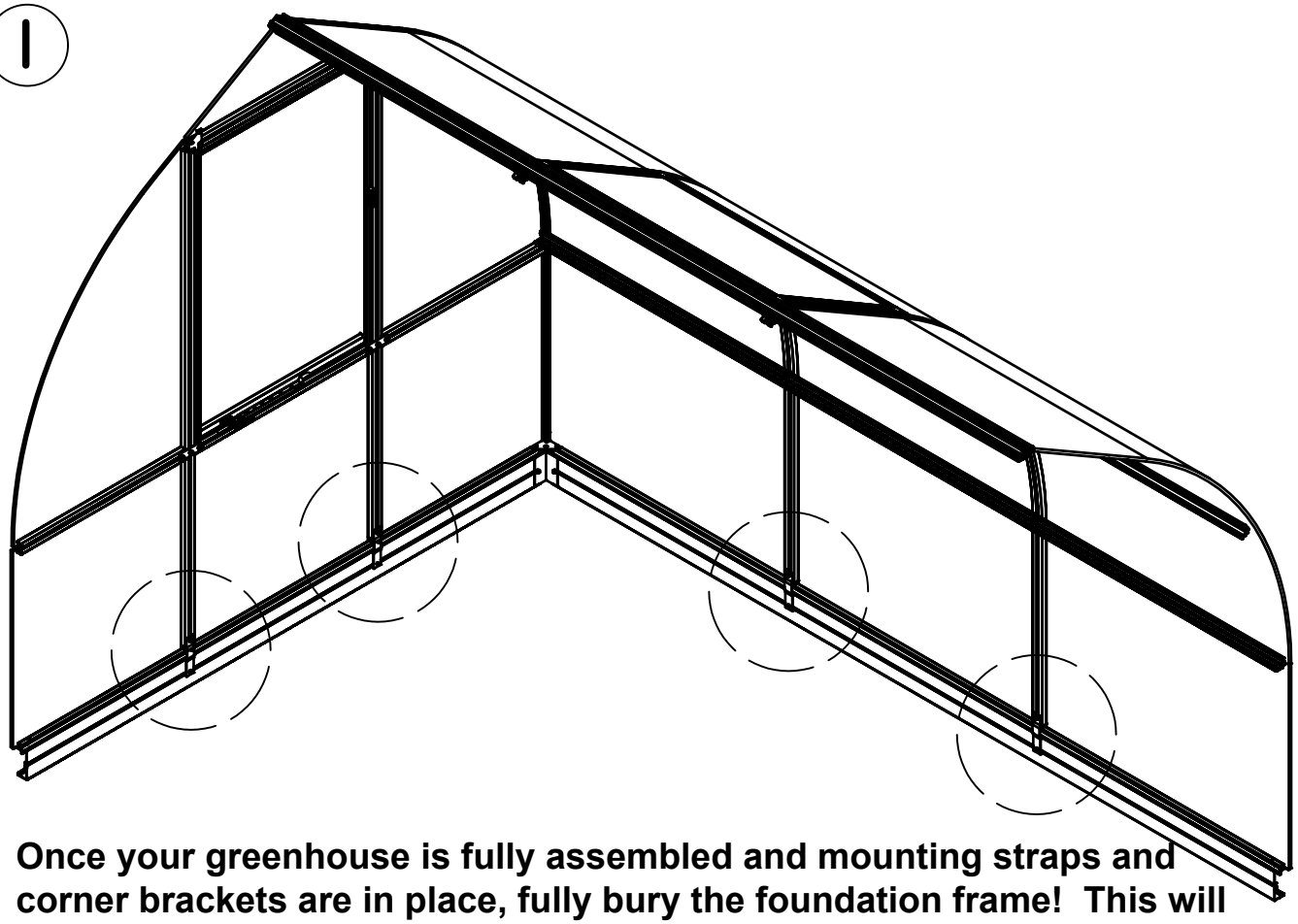
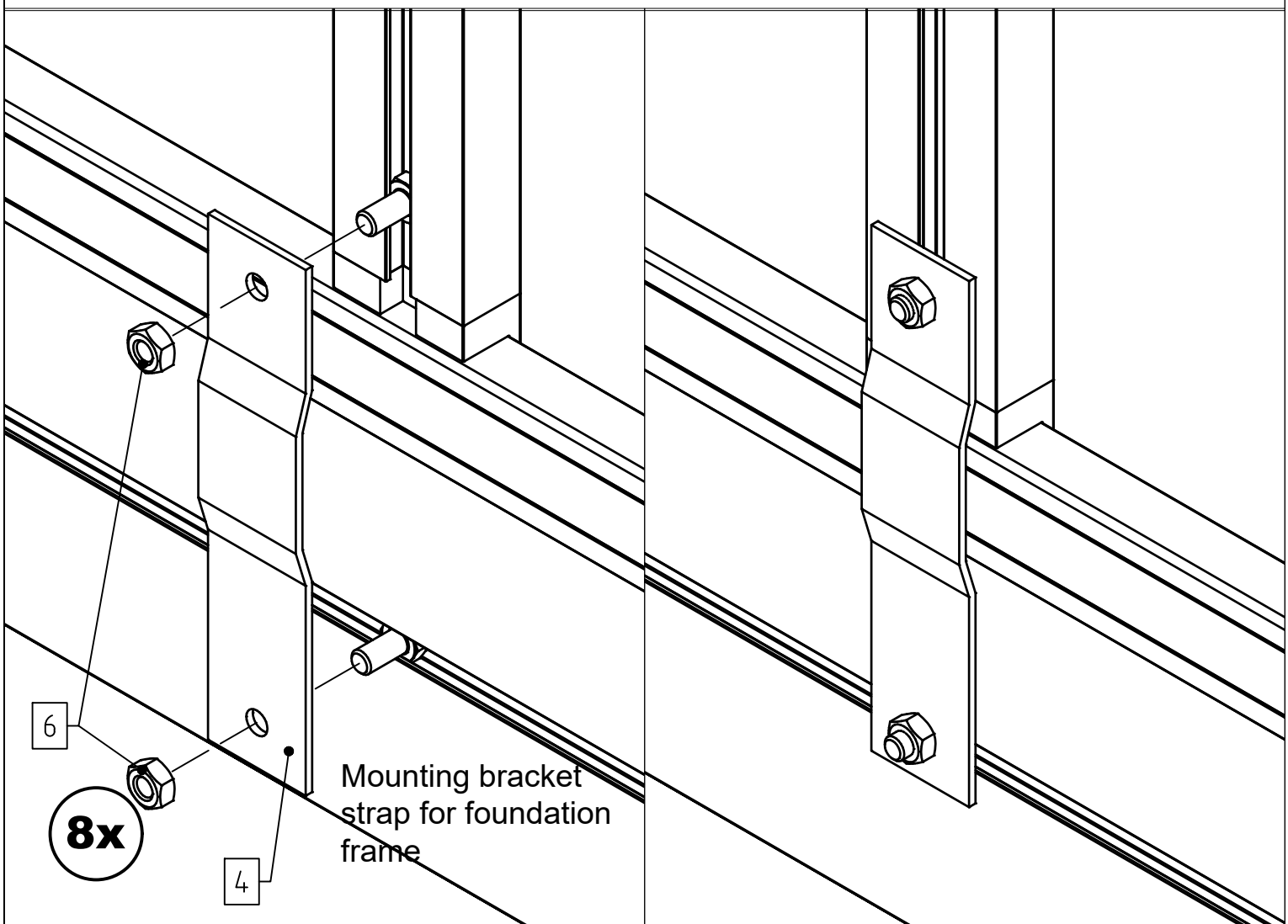
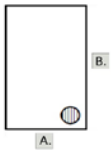
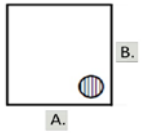
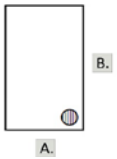
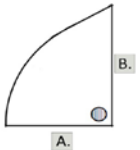
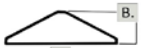
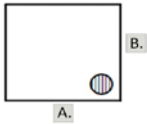
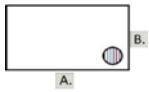
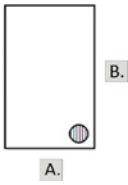
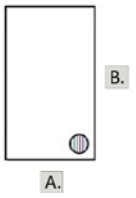


Once your greenhouse is fully assembled and mounting straps and corner brackets are in place, fully bury the foundation frame! This will secure the greenhouse.

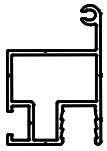
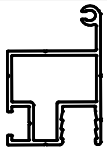
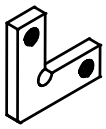
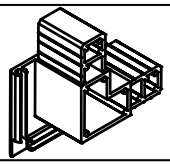
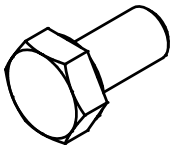
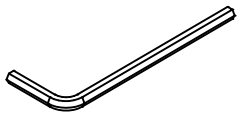
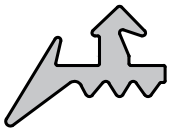
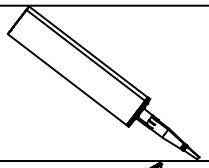
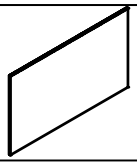


Riga Polycarbonate Panel Spec Sheet

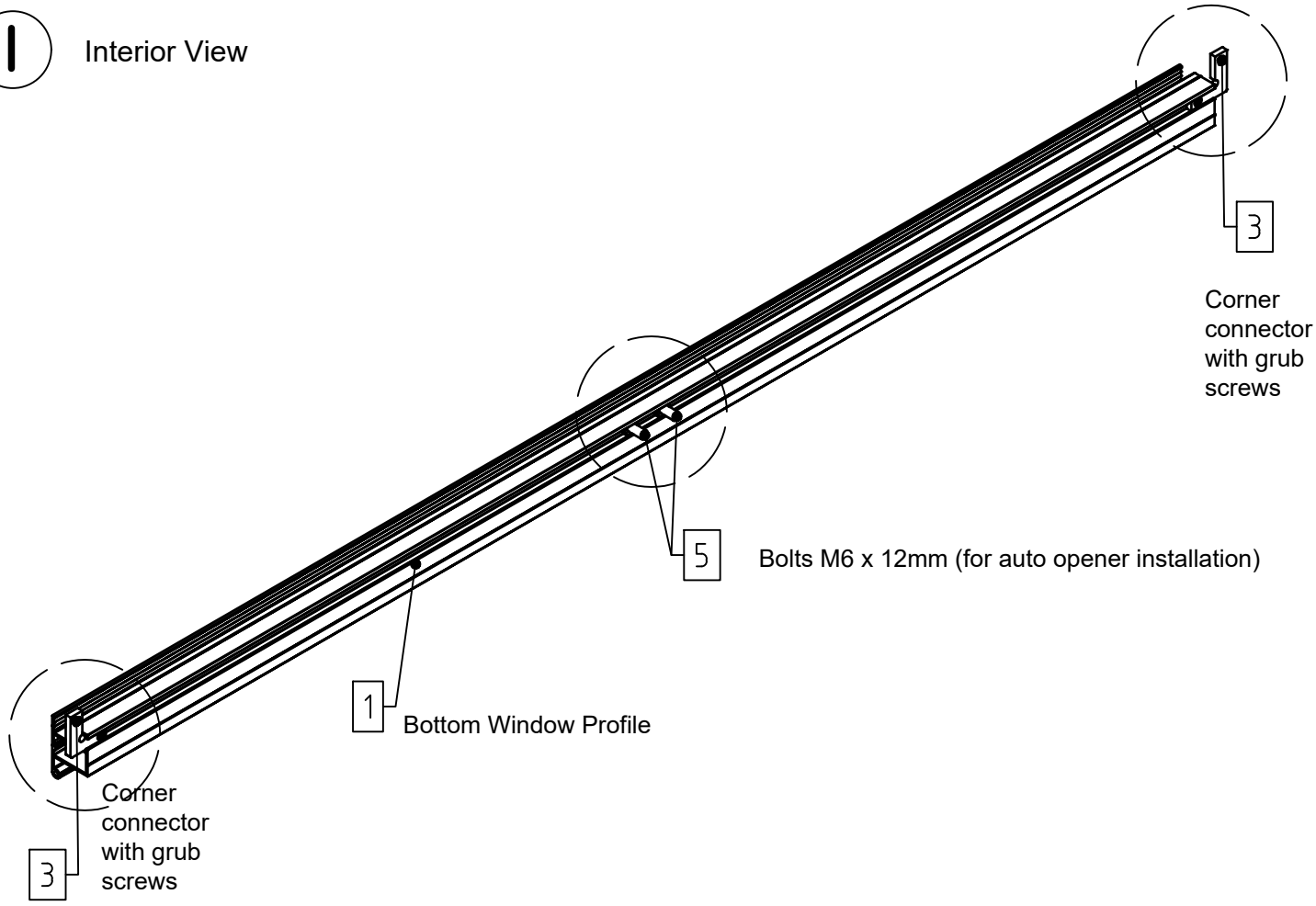
Model #	Upper Door (Front Gable only)	Lower Door (Front Gable only)	Rear Gable Window	Curved Gable Above (Front & Rear)	Gable Below L & R (Front & Rear)	Front Gable Triangle	Rear Gable Triangle	Rear Gable Below (Center)	Roof Window	Side Glazing below roof window	Full Side Glazing
											
Riga II-S (2-S) "Riga 2s"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 1	Qty 1	Qty 3
7'8" x 7' x 7'1" H	724mm x 1031mm	724mm x 676mm	724mm x 1031mm	730mm x 1135mm	730mm x 728mm	787mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	974mm x 565mm	1048mm x 2634mm
	28 1/2" x 40 9/16"	28 1/2" x 26 5/8"	28 1/2" x 40 9/16"	28 3/4" x 44 11/16"	28 3/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	38 3/8" x 22 1/4"	41 1/4" x 103 11/16"
Riga III-S (3-S) "Riga 3s"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 1	Qty 1	Qty 5
7'8" x 10'6" x 7'1" H	724mm x 1031mm	724mm x 676mm	724mm x 1031mm	730mm x 1135mm	730mm x 728mm	787mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	974mm x 565mm	1048mm x 2634mm
	28 1/2" x 40 9/16"	28 1/2" x 26 5/8"	28 1/2" x 40 9/16"	28 3/4" x 44 11/16"	28 3/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	38 3/8" x 22 1/4"	41 1/4" x 103 11/16"
Riga IV-S (4-S) "Riga 4s"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 2	Qty 2	Qty 6
7'8" x 14' x 7'1" H	724mm x 1031mm	724mm x 676mm	724mm x 1031mm	730mm x 1135mm	730mm x 728mm	787mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	974mm x 565mm	1048mm x 2634mm
	28 1/2" x 40 9/16"	28 1/2" x 26 5/8"	28 1/2" x 40 9/16"	28 3/4" x 44 11/16"	28 3/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	38 3/8" x 22 1/4"	41 1/4" x 103 11/16"
Riga III-L (3-L) "Riga 3"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 1	Qty 1	Qty 5
9'8" x 10'6" x 7'7" H	724mm x 1215mm	724mm x 676mm	724mm x 1215mm	1048mm x 1319mm	1048mm x 728mm	787mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	1048mm x 2345mm	1048mm x 3000mm
	28 1/2" x 47 13/16"	28 1/2" x 26 5/8"	28 1/2" x 47 13/16"	41 1/4" x 51 15/16"	41 1/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	41 1/4" x 92 5/16"	41 1/4" x 118 1/8"
Riga IV-L (4-L) "Riga 4"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 2	Qty 2	Qty 6
9'8" x 14' x 7'7" H	654mm x 1106mm	654mm x 696mm	724mm x 1215mm	1048mm x 1319mm	1048mm x 728mm	762mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	1048mm x 2345mm	1048mm x 3000mm
2025 Version!	25 3/4" x 43 9/16"	25 3/4" x 27 3/8"	28 1/2" x 47 13/16"	41 1/4" x 51 15/16"	41 1/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	41 1/4" x 92 5/16"	41 1/4" x 118 1/8"
2025 Riga V-L (5-L) "Riga 5"	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 1	Qty 1	Qty 1	Qty 4	Qty 4	Qty 6
9'8" x 17'6" x 7'7" H	654mm x 1106mm	654mm x 696mm	724mm x 1215mm	1048mm x 1319mm	1048mm x 728mm	762mm x 240mm	787mm x 240mm	787mm x 728mm	974mm x 565mm	1048mm x 2345mm	1048mm x 3000mm
2025 Version!	25 3/4" x 43 9/16"	25 3/4" x 27 3/8"	28 1/2" x 47 13/16"	41 1/4" x 51 15/16"	41 1/4" x 28 11/16"	31" x 9 7/16"	31" x 9 7/16"	31" x 28 11/16"	38 3/8" x 22 1/4"	41 1/4" x 92 5/16"	41 1/4" x 118 1/8"

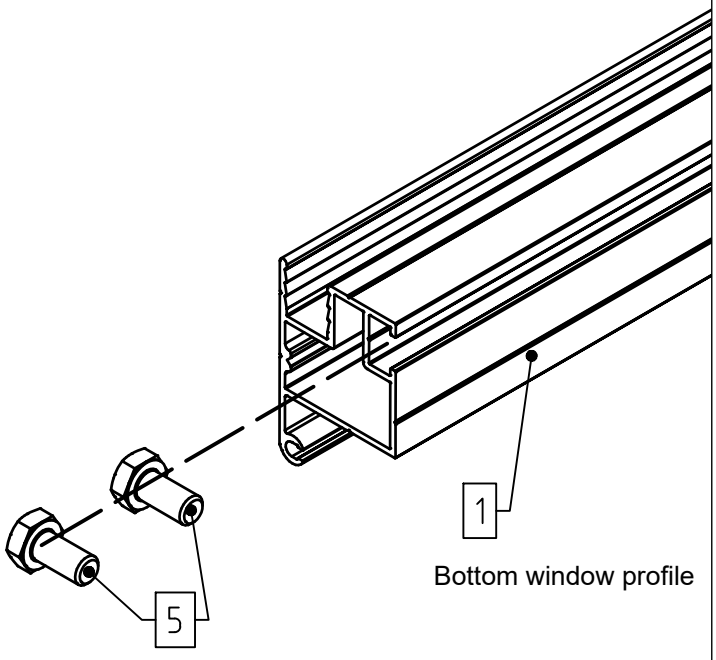
Roof Vent Assembly

Packlist and Parts

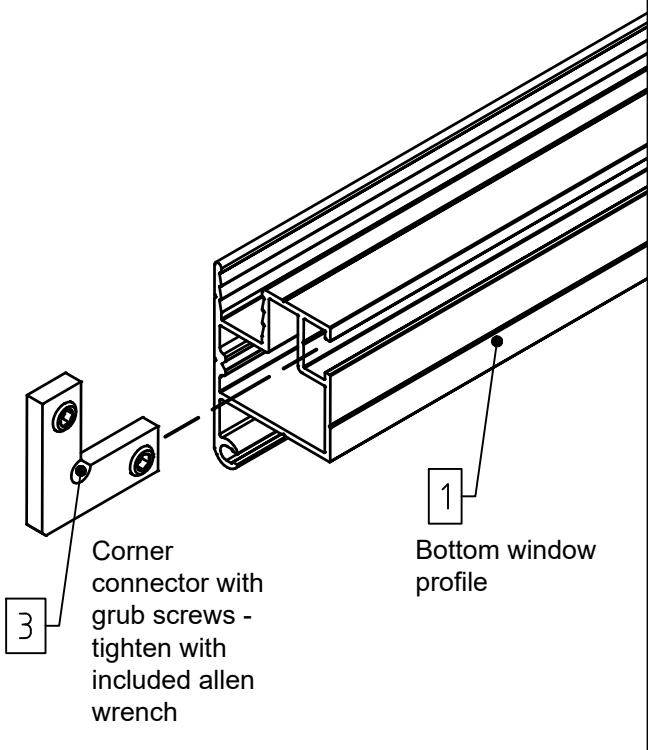
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P082–02–01–00–04–1	Window Profile (top and bottom)	2	952 mm 37 1/2"
2		P082–01–01–00–04–1	Window Profile (left and right)	2	541 mm 21 5/16"
3		9999000070	Corner connector w/ grub screws 30 x 30 x 4 mm	4	
4		9999000005	Black corner connector	4	
5		9999000124	Bolt M6 x 12mm (for auto opener)	2	DIN 933
6		9999000056	Alan wrench	1	DIN 911
7		9999000376	Window Seal Gasket	2,5 lfdm 8.25 feet	
8		10109413	Silicone	1	
9			Roof Window Poly Panel 974 x 565 mm 36 3/8" x 22 1/4"	1	
10					
11					
12					

Interior View





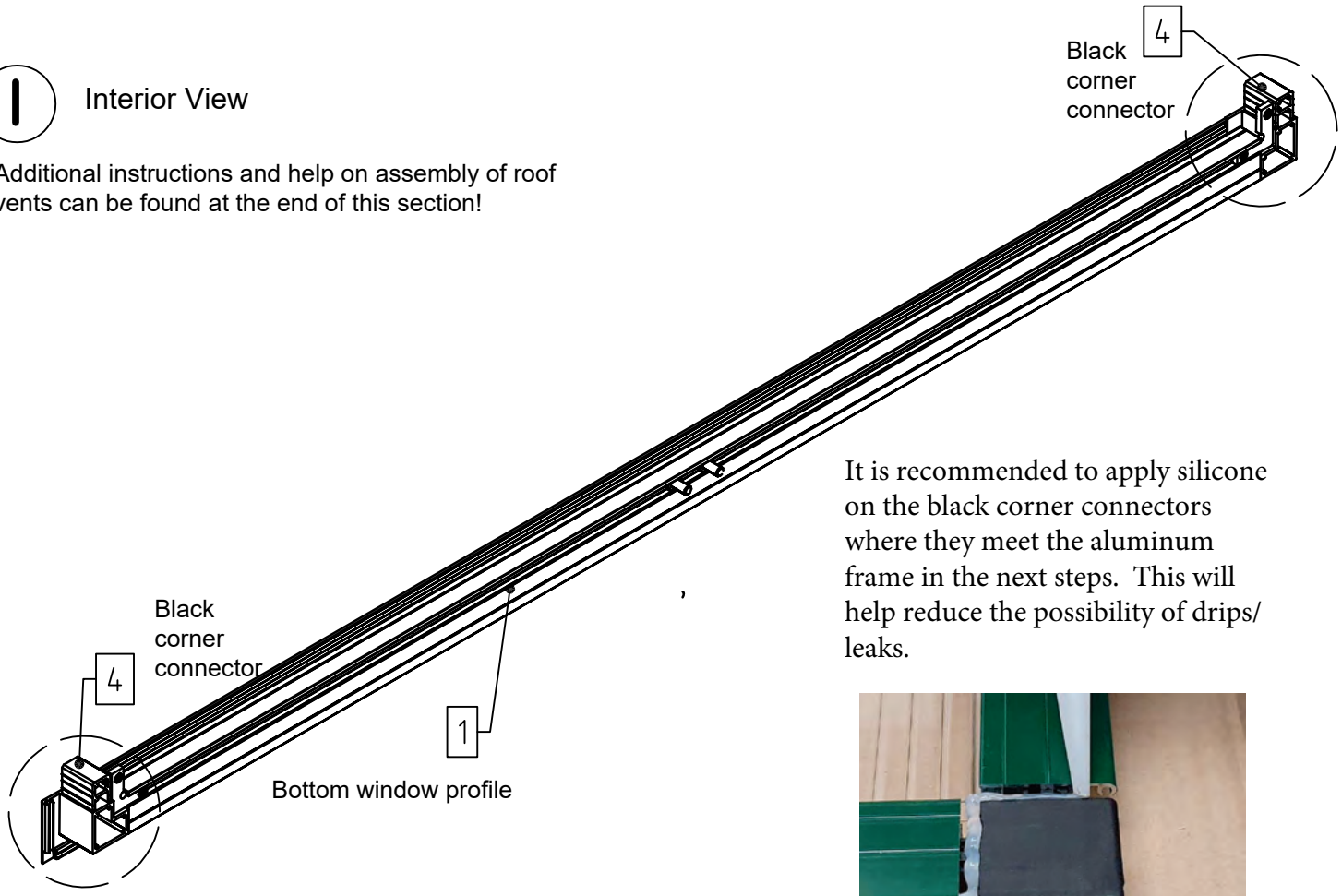
2x



DF-A

I Interior View

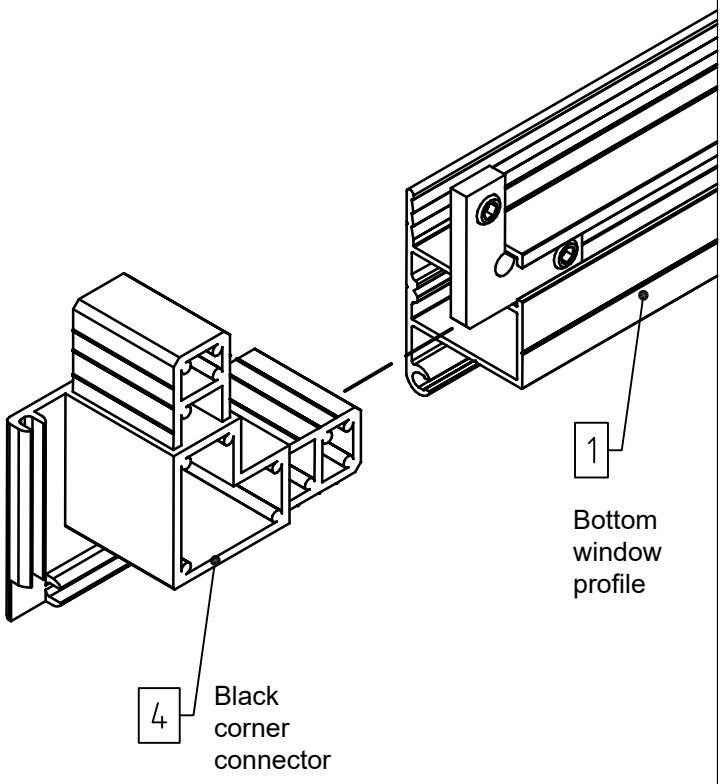
Additional instructions and help on assembly of roof vents can be found at the end of this section!

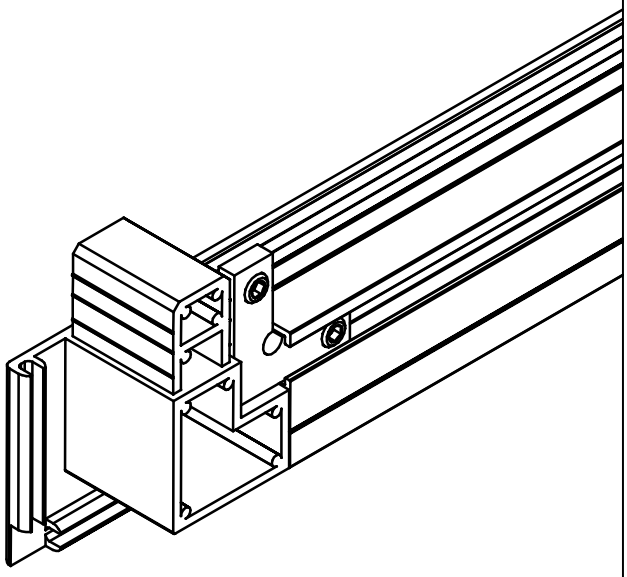


It is recommended to apply silicone on the black corner connectors where they meet the aluminum frame in the next steps. This will help reduce the possibility of drips/ leaks.

2x

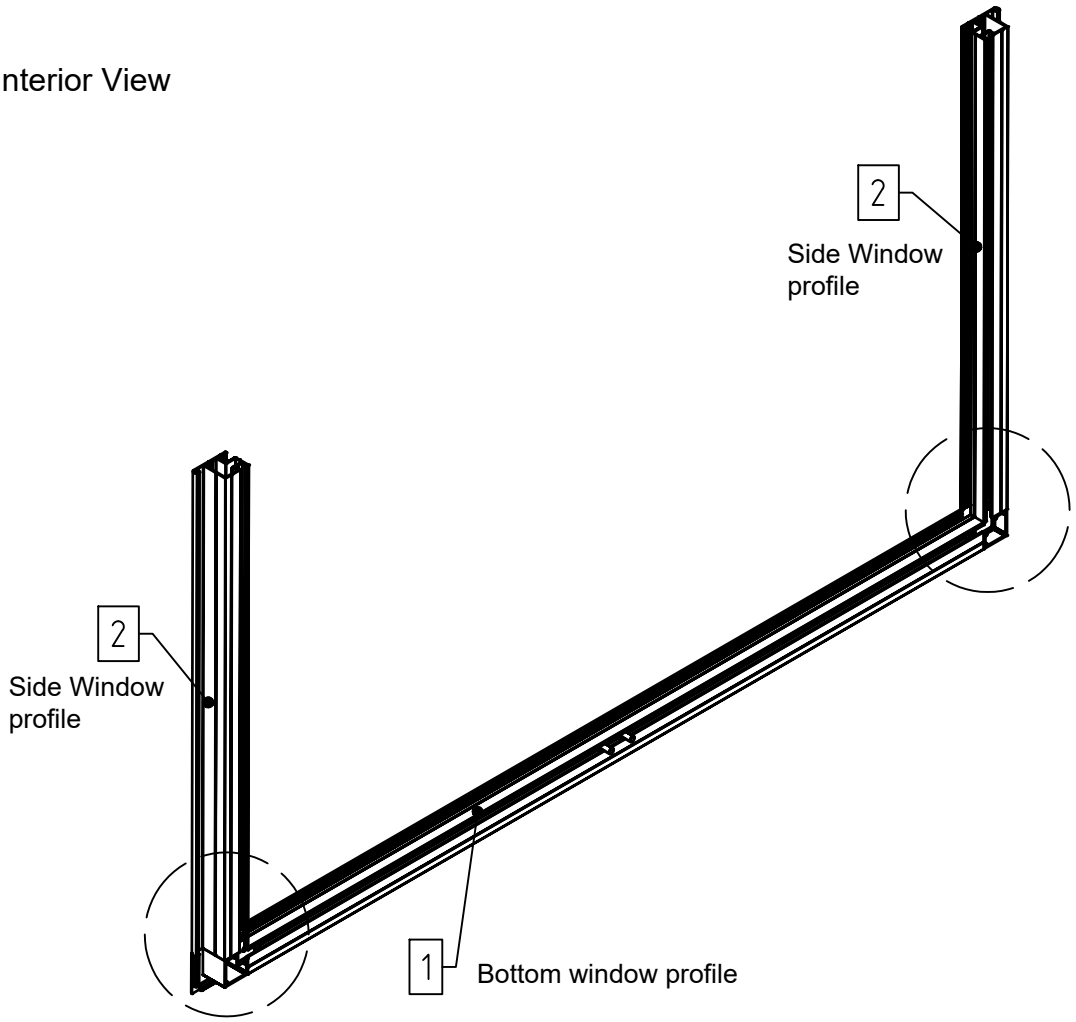
(repeat on both sides)

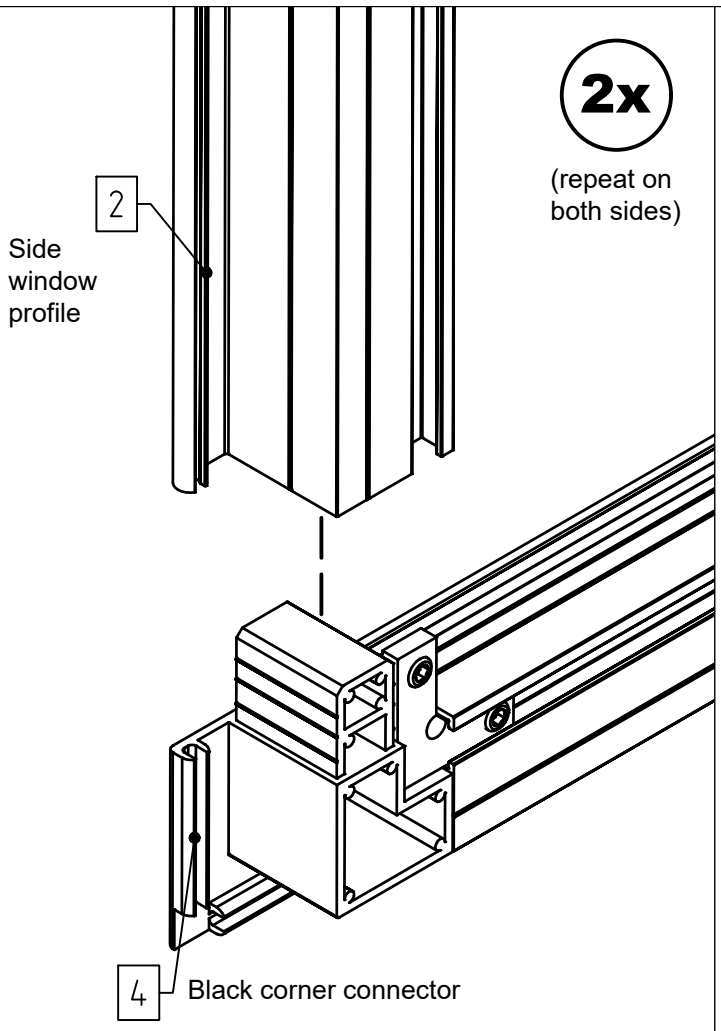


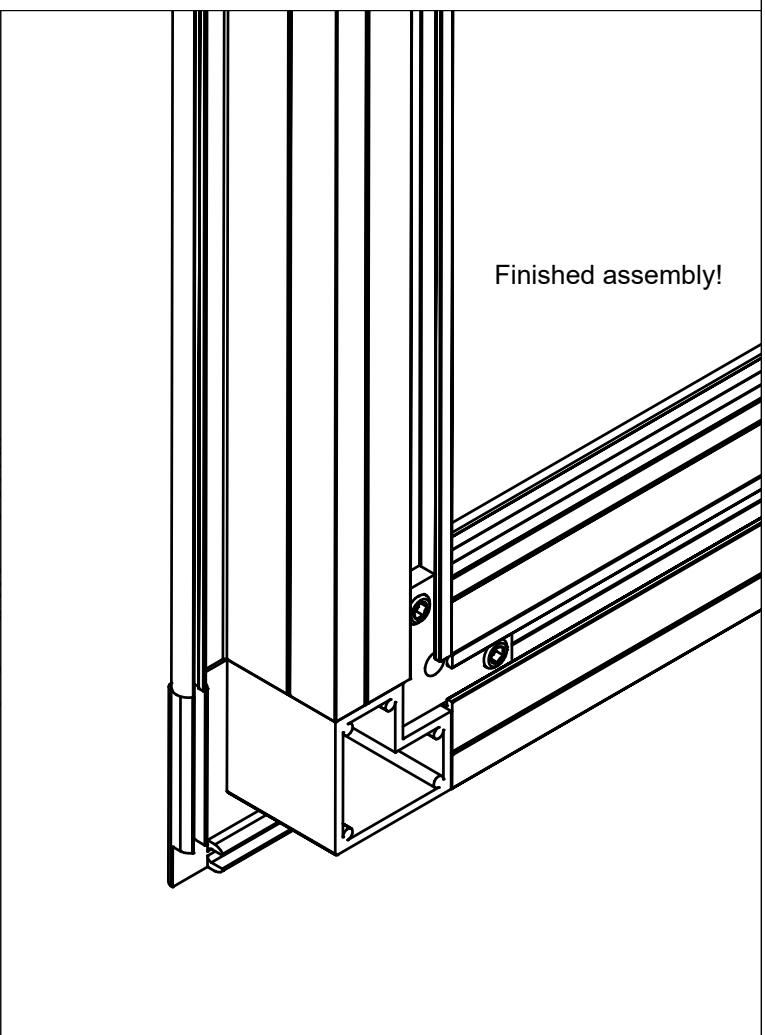


DF-B

Interior View

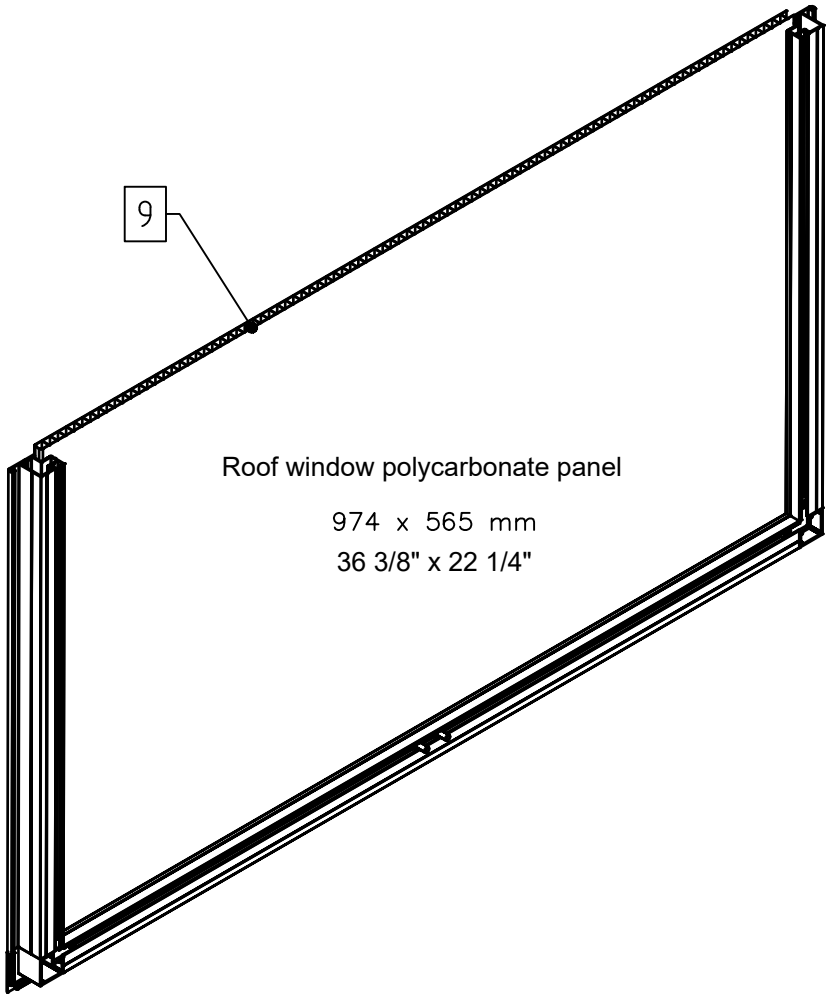


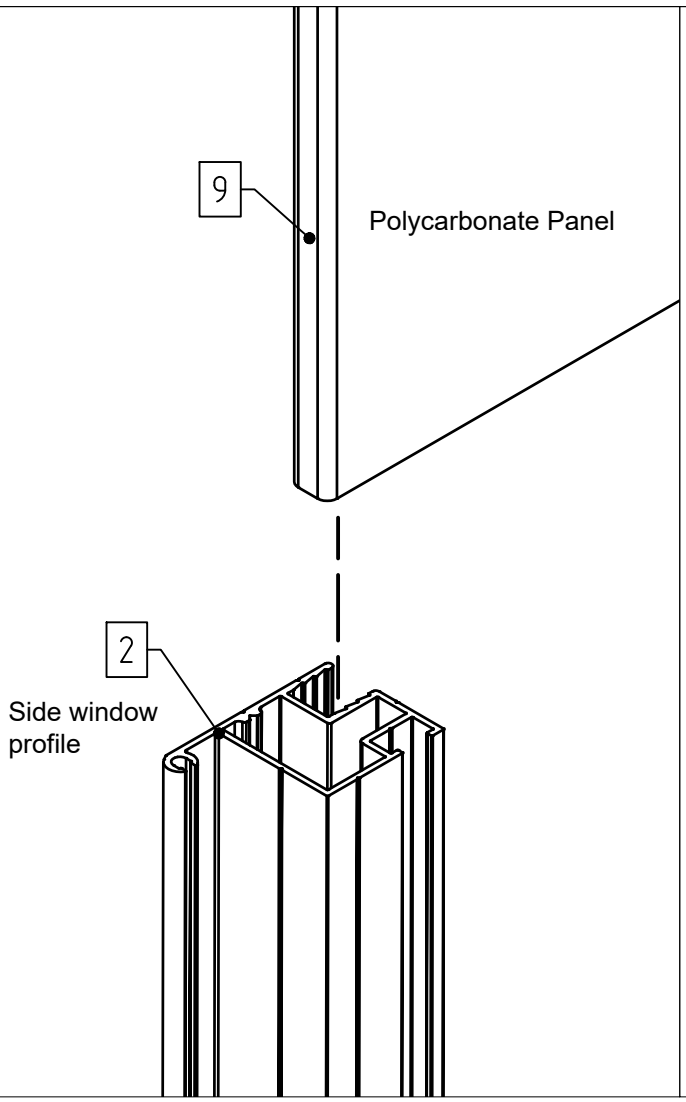




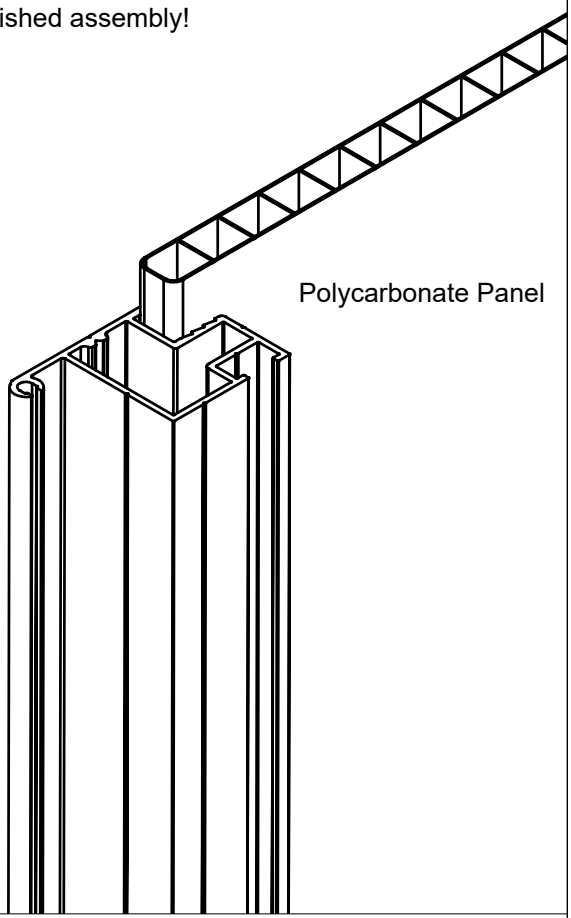
DF-C

Interior View





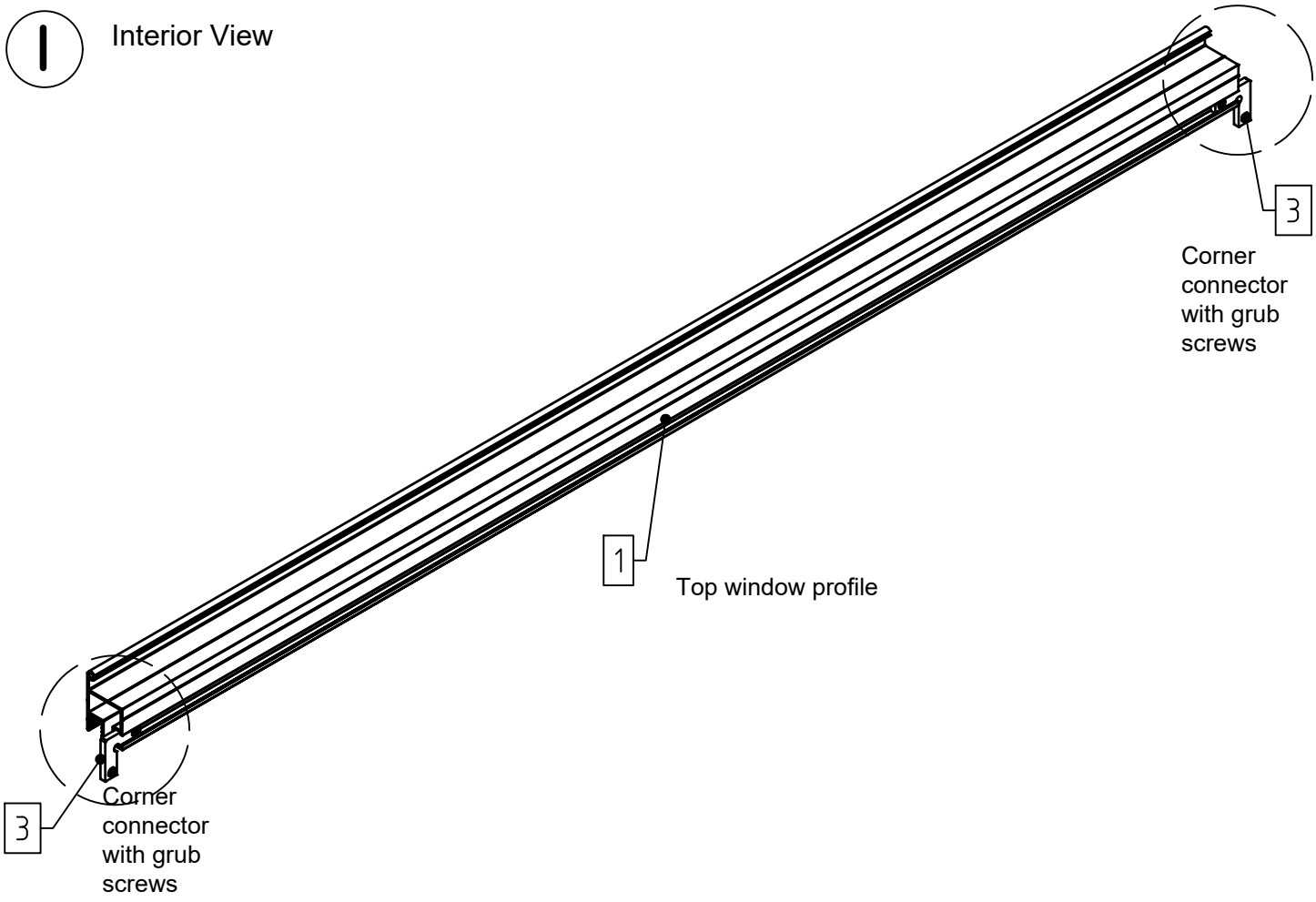
Finished assembly!



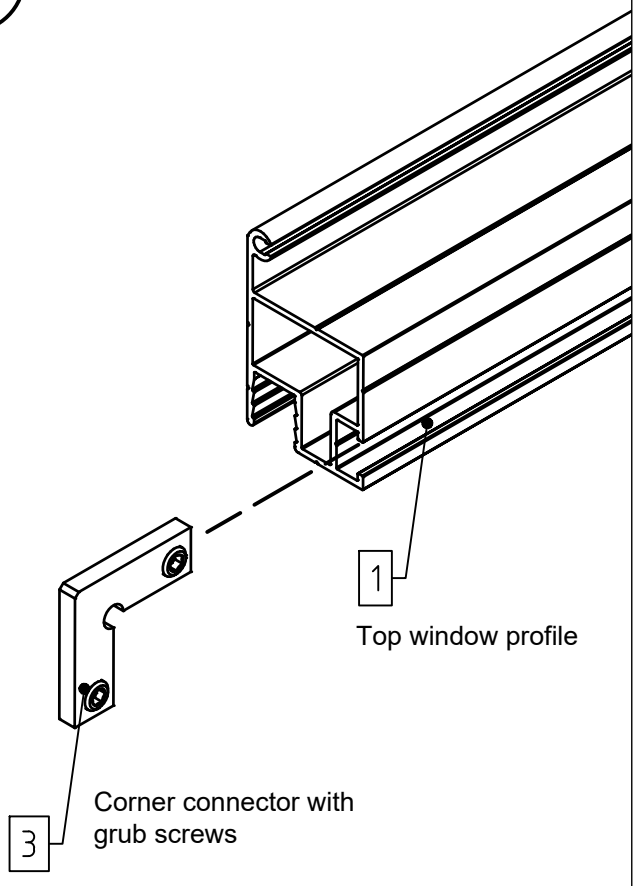
DF-D

1

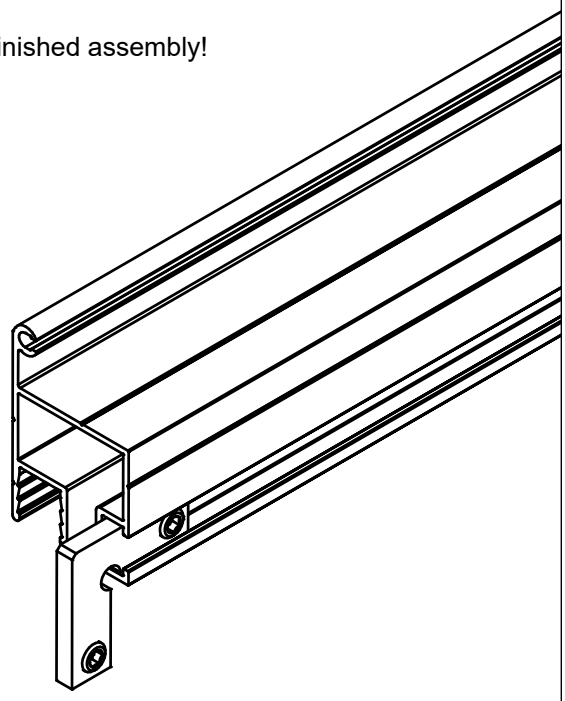
Interior View



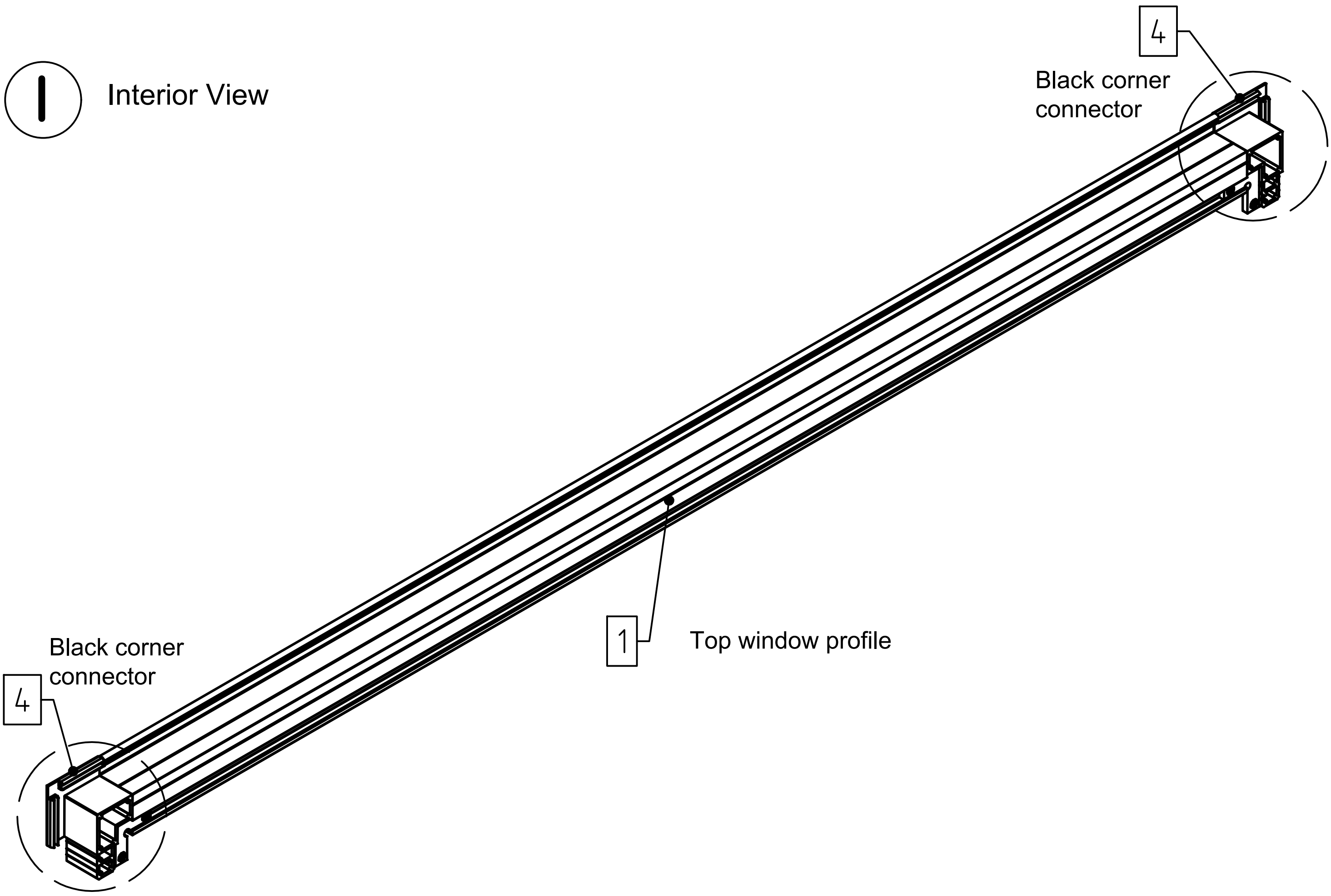
2x



Finished assembly!



1 Interior View



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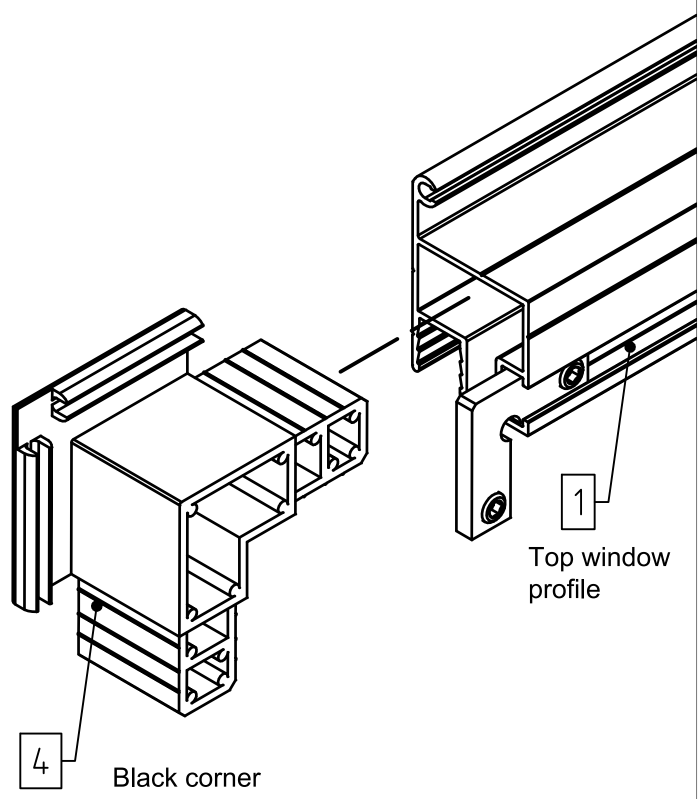
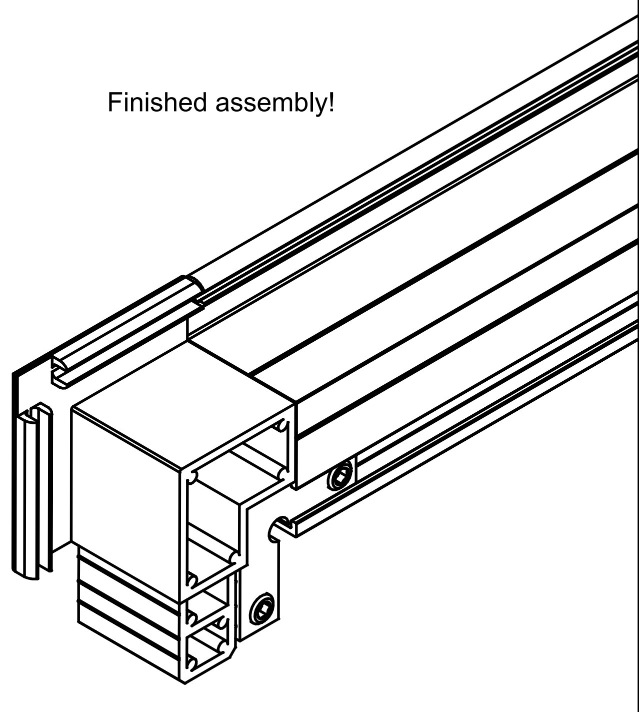
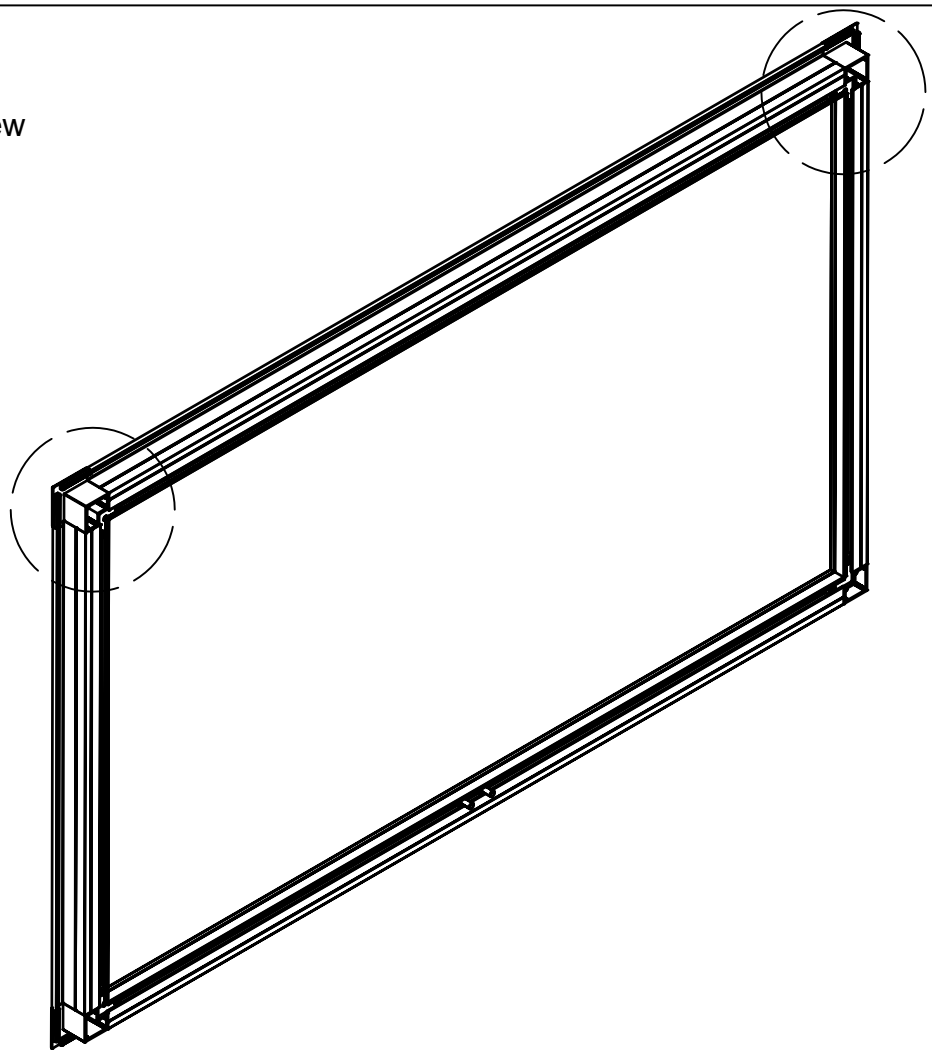
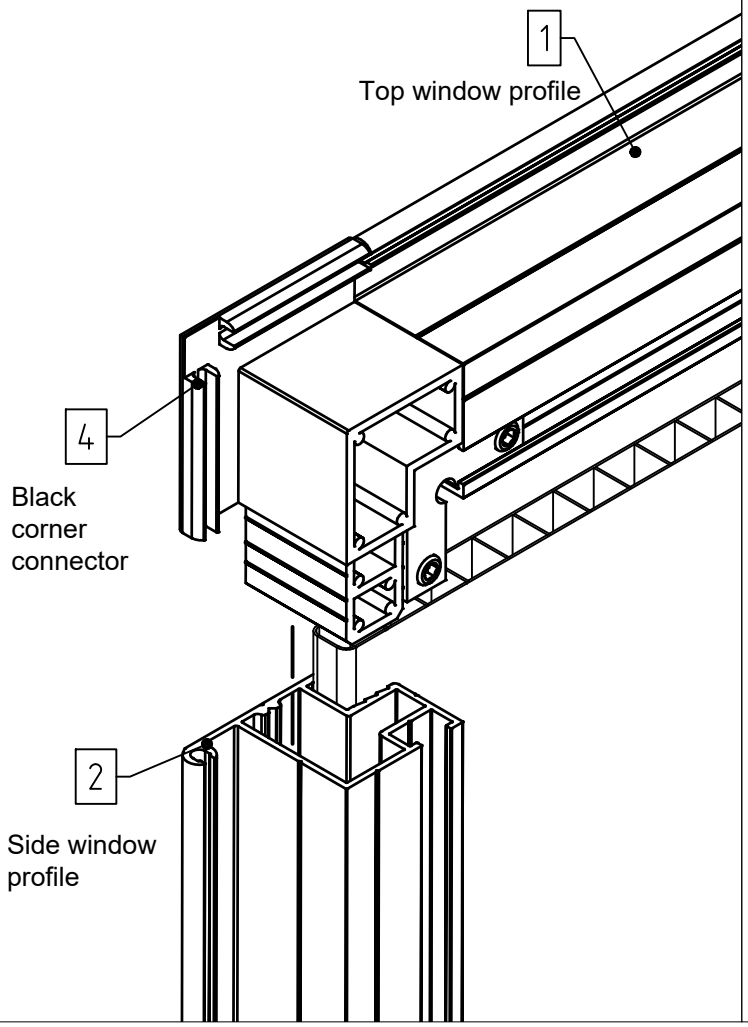


Finished assembly!



Interior View

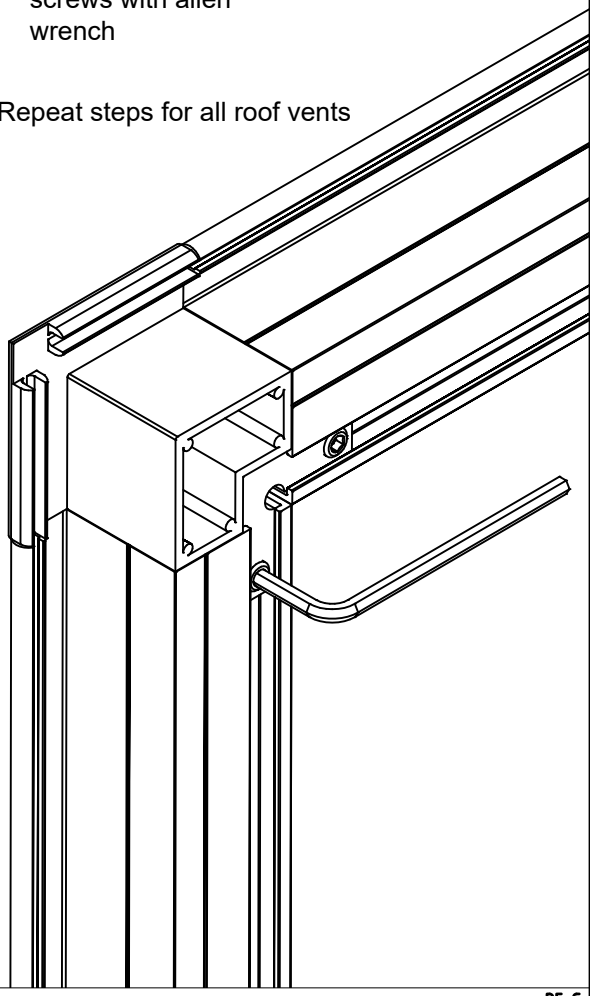




8x

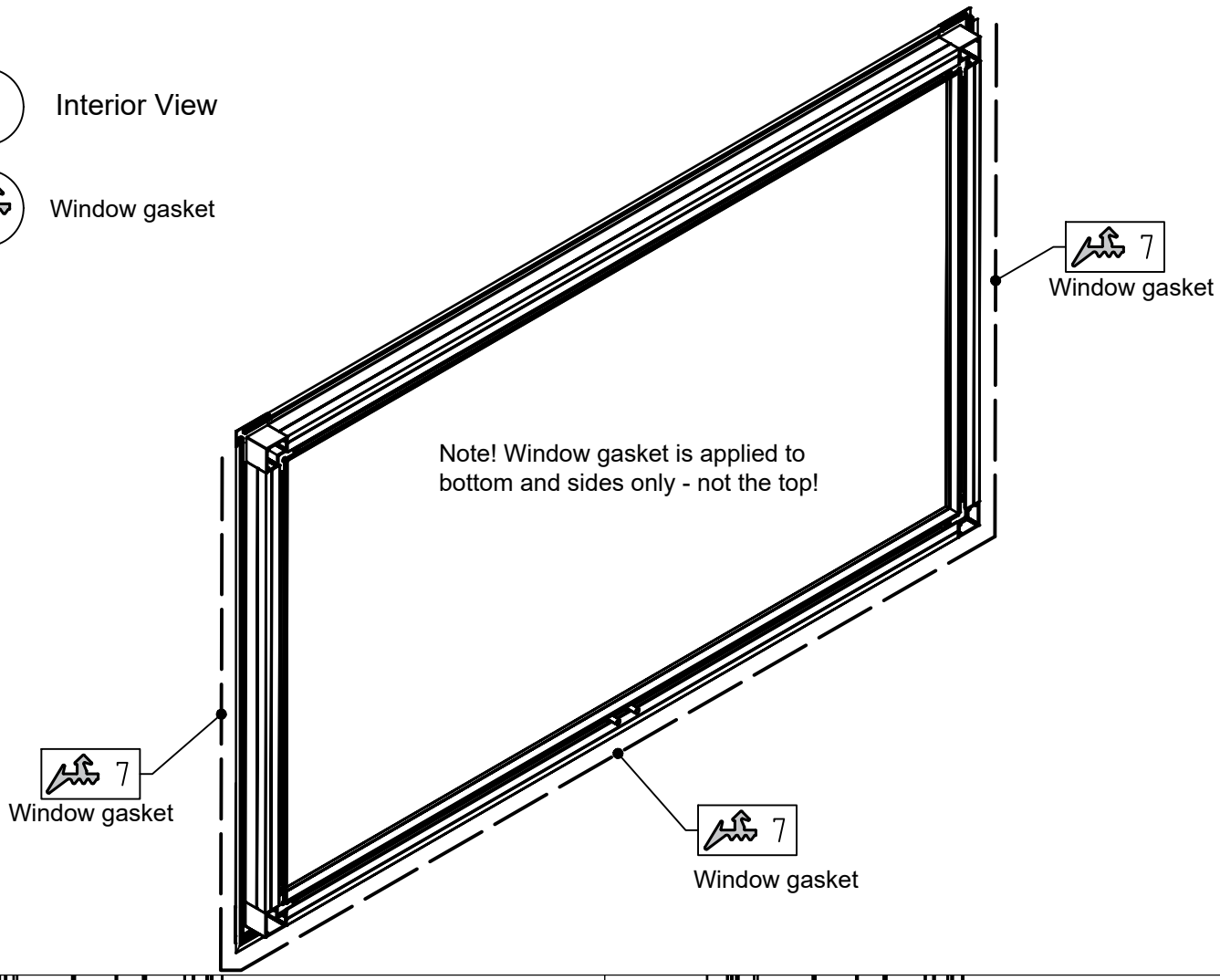
Tighten all grub screws with allen wrench

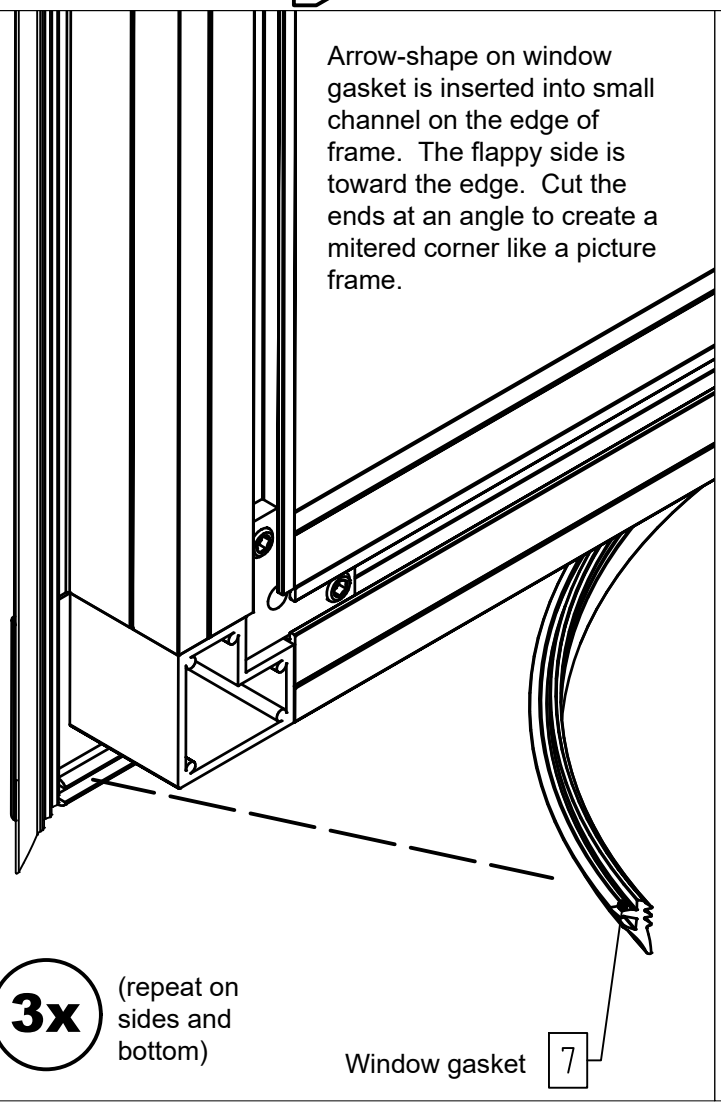
Repeat steps for all roof vents



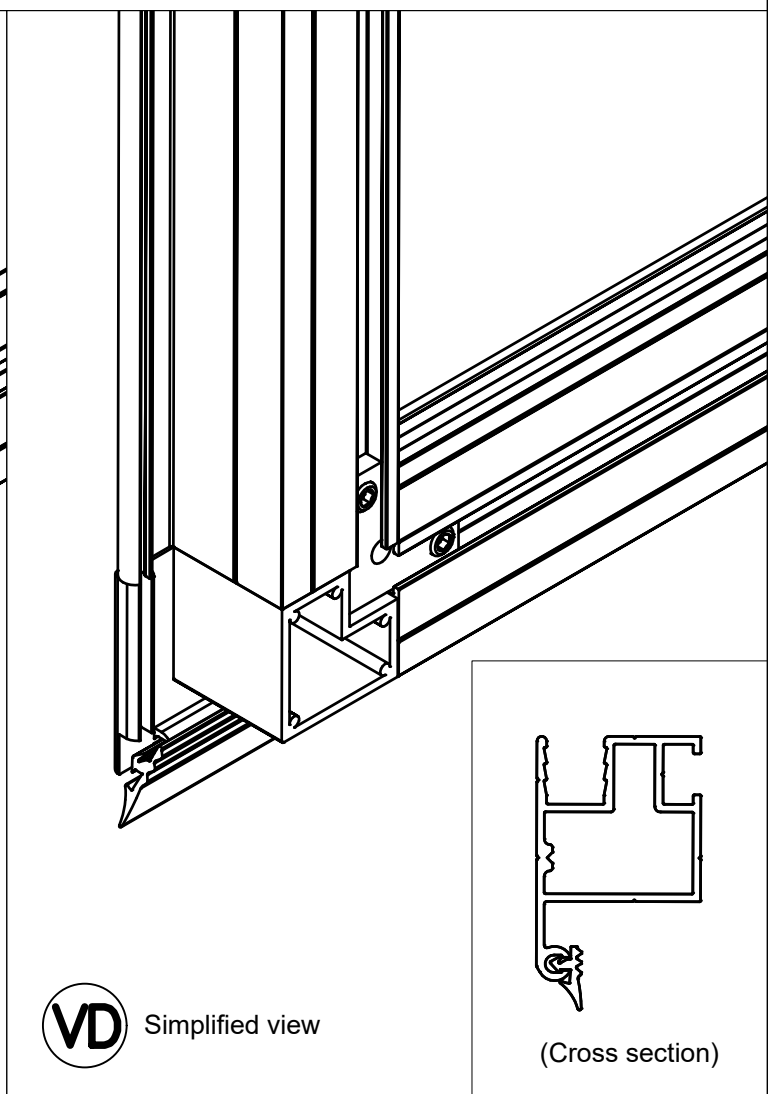
I Interior View

Window gasket





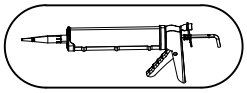
3x (repeat on sides and bottom)



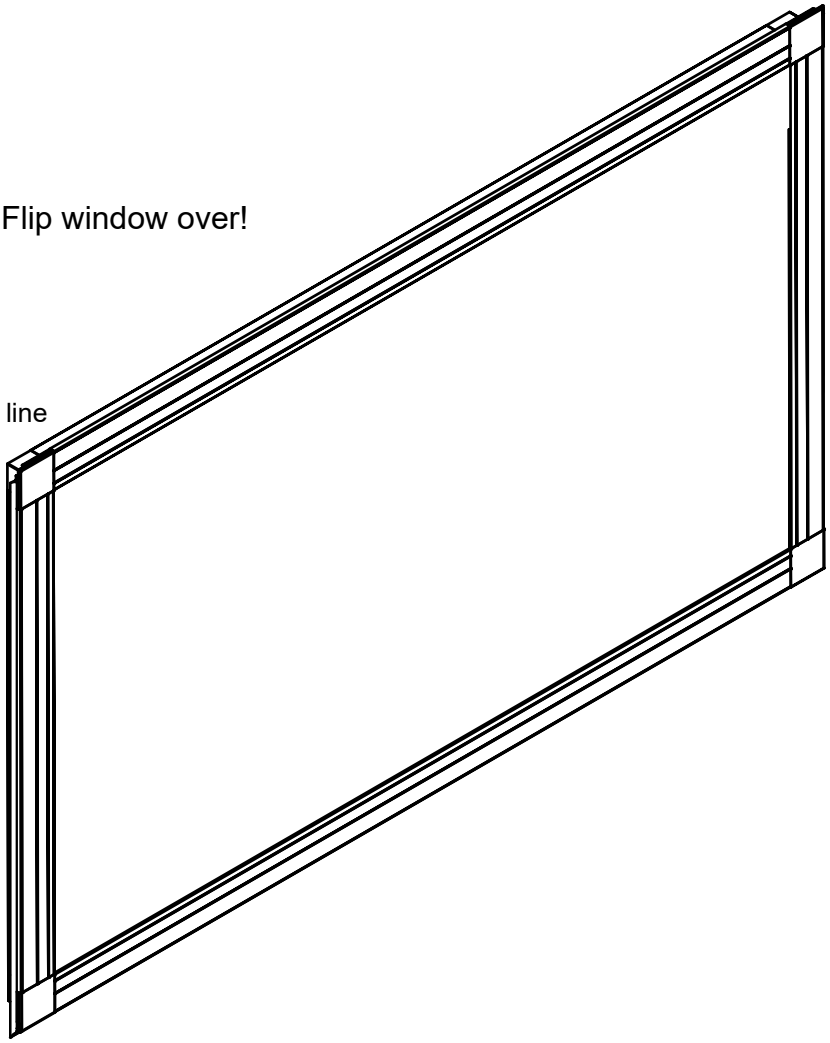
DF-H

A Exterior View

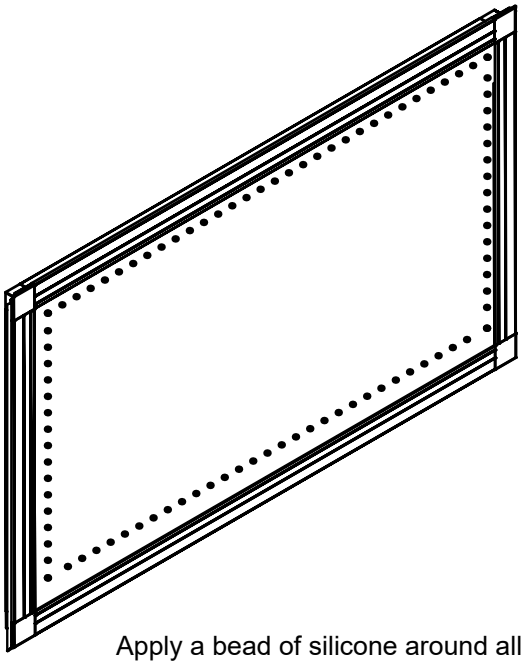
Reverse View! Flip window over!



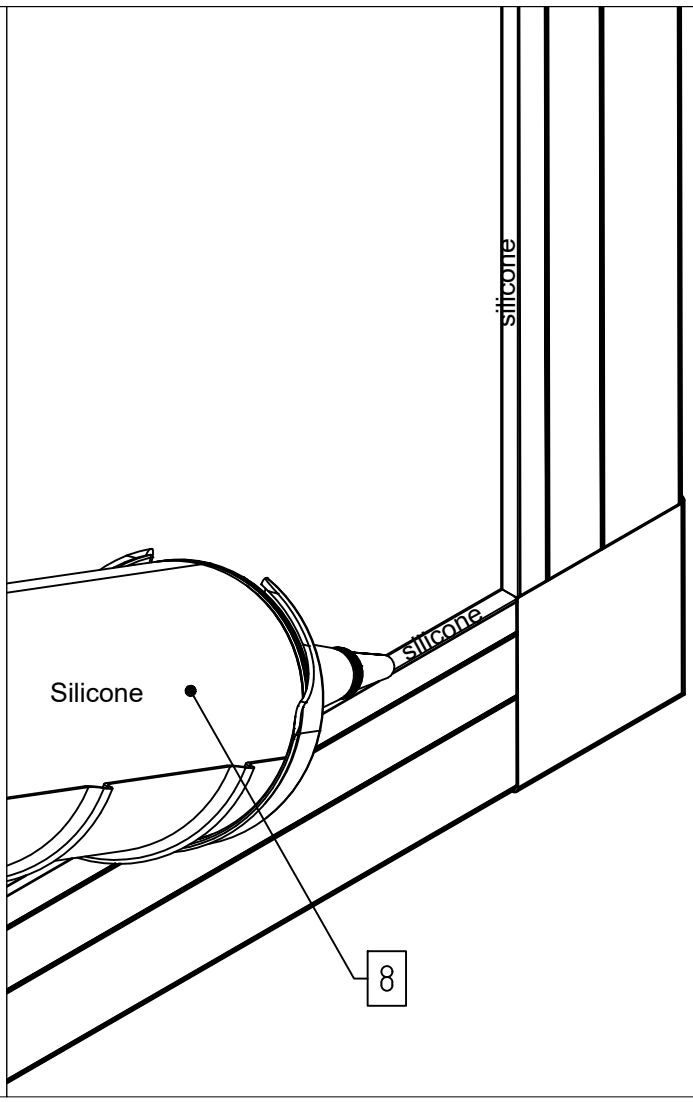
Silicone is shown with dotted line



Seal the window with silicone.



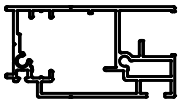
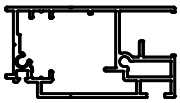
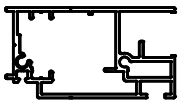
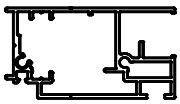
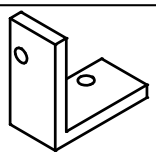
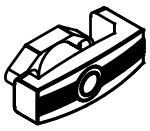
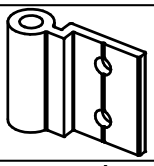
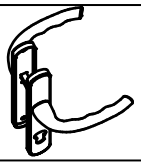
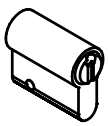
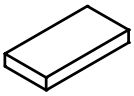
Apply a bead of silicone around all four sides where the polycarbonate panel meets the aluminum framing.



DF-I

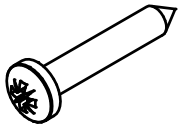
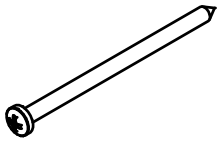
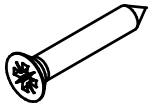
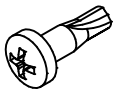
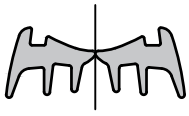
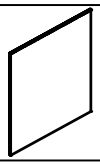
Upper Door for Front Gable

Packlist and Parts

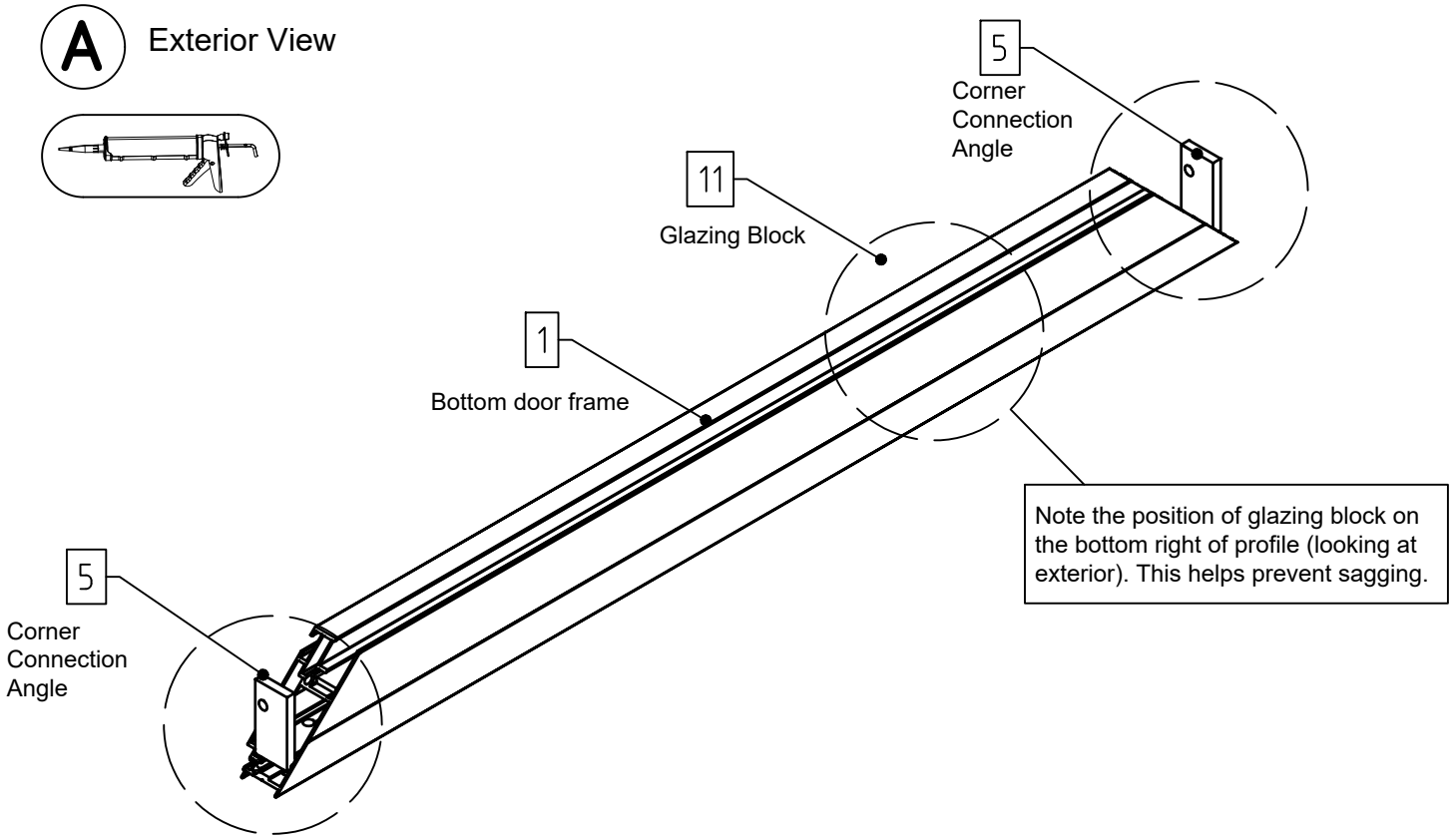
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P059–07–01–00–00–1	Bottom Door Frame (with drainage hole)	1	748 mm 29 1/16"
2		P059–01–01–00–00–1	Top Door Frame	1	748 mm 29 1/16"
3		P059–04–01–00–00–1 P059–08–01–00–00–1	Vertical Door Frame (handle side with lock holes)	1	RIGA S: 1018 mm 40 1/16" RIGA L: 1200 mm 47 1/4"
4		P059–05–01–00–00–1 P059–09–01–00–00–1	Vertical Door Frame (hinge side w/ hinge holes)	1	RIGA S: 1018 mm 40 1/16" RIGA L: 1200 mm 47 1/4"
5		9999000065	Corner connection angle	4	
6		9999000023	Sash Lock	1	
7		9999000716	Hinge	4	30 mm 1 3/16"
8		9999000523	Lockcase	1	
9		9999000556	Door Handle Assembly (w/ rod and 3 screws)	1	
10		9999000522	Lock cylinder with screw	1	
11		9999001240	Glazing Block	2	
12		9999000637	Metal disk for magenetic door catch	1	

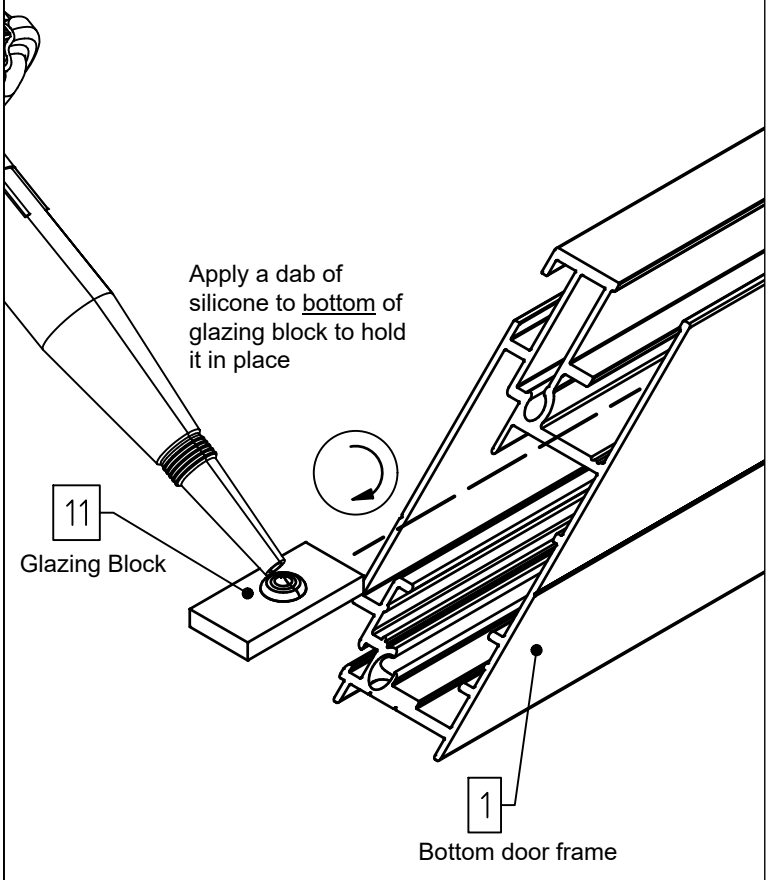
Upper Door for Front Gable

Packlist and Parts cont'd

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000596	Panhead Screw 4.2 x 25mm (to connect corners of doors)	4	DIN 7981
14		9999000662	Panhead Screw 4.2 x 70mm (to connect corners of doors)	4	DIN 7981
15		9999000152	Countersunk Screw 3.5 x 22mm (screws for sash lock)	2	DIN 7982
16		9999000204	Countersunk Screw 4.2 x 13mm (to install lockcase)	2	DIN 7982
17		9999000144	Panhead Screw 4.2 x 13mm (screws for hinges)	8	DIN 7981
18		9999002532	Panhead Screw (self-tapping) 3.9x13mm (for magnetic catch)	1	DIN 7504
19		9999000120	Wedge Gasket 6-8mm PULL APART AT MIDDLE	2,0 lfdm. 78 3/4" (total in double strand)	Pull apart at middle to make two strands
20		99990000032	Y Gasket	4,0 lfdm. 157 1/2"	
21			Polycarbonate Panel Riga S: 924x654mm 36 3/8" x 25 3/4" Riga L: 1106x654mm 43 9/16" x 25 3/4"	1	
22					
23					
24					

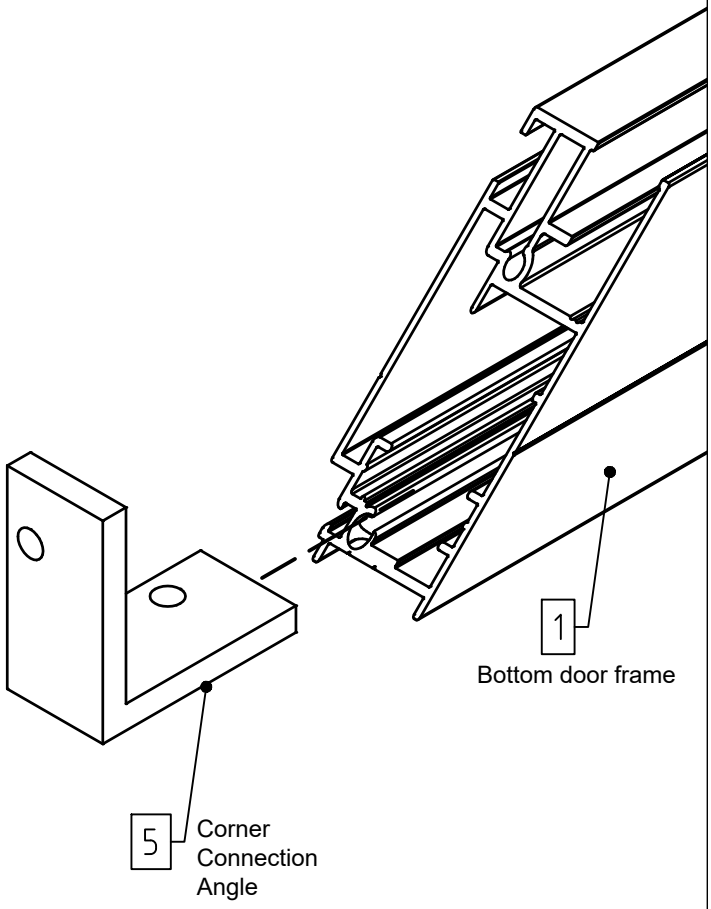
A Exterior View



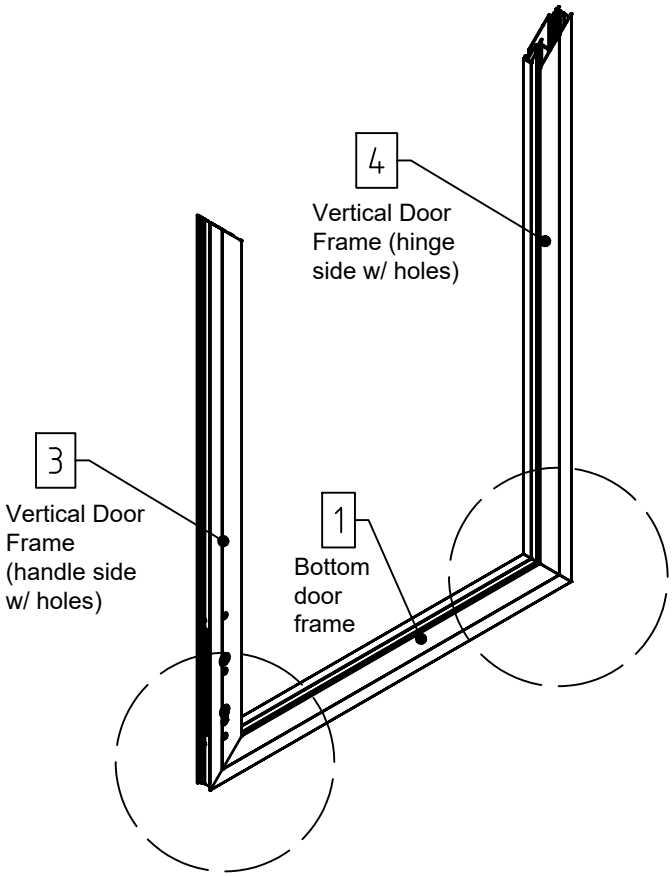


2x

(repeat twice)



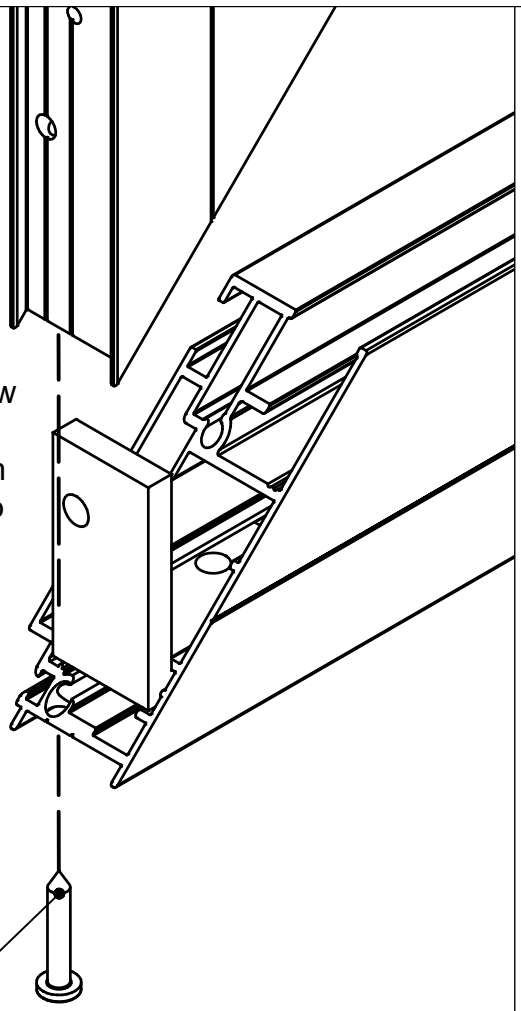
A Exterior View



2x

(repeat twice)

Note that screw goes through hole on bottom profile and into channel on vertical profile

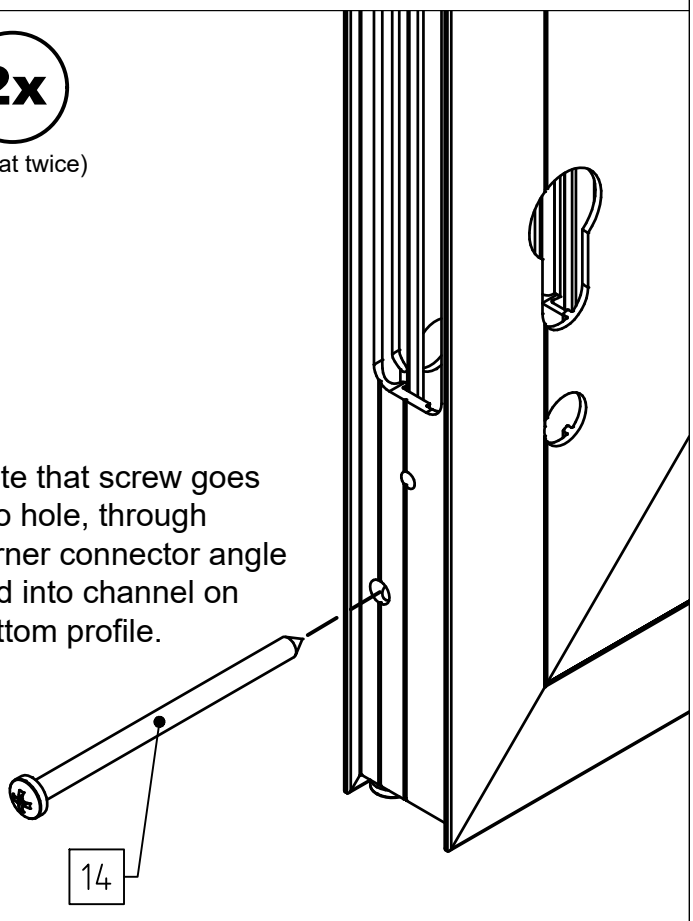


Panhead screw 4.2 x 25mm

2x

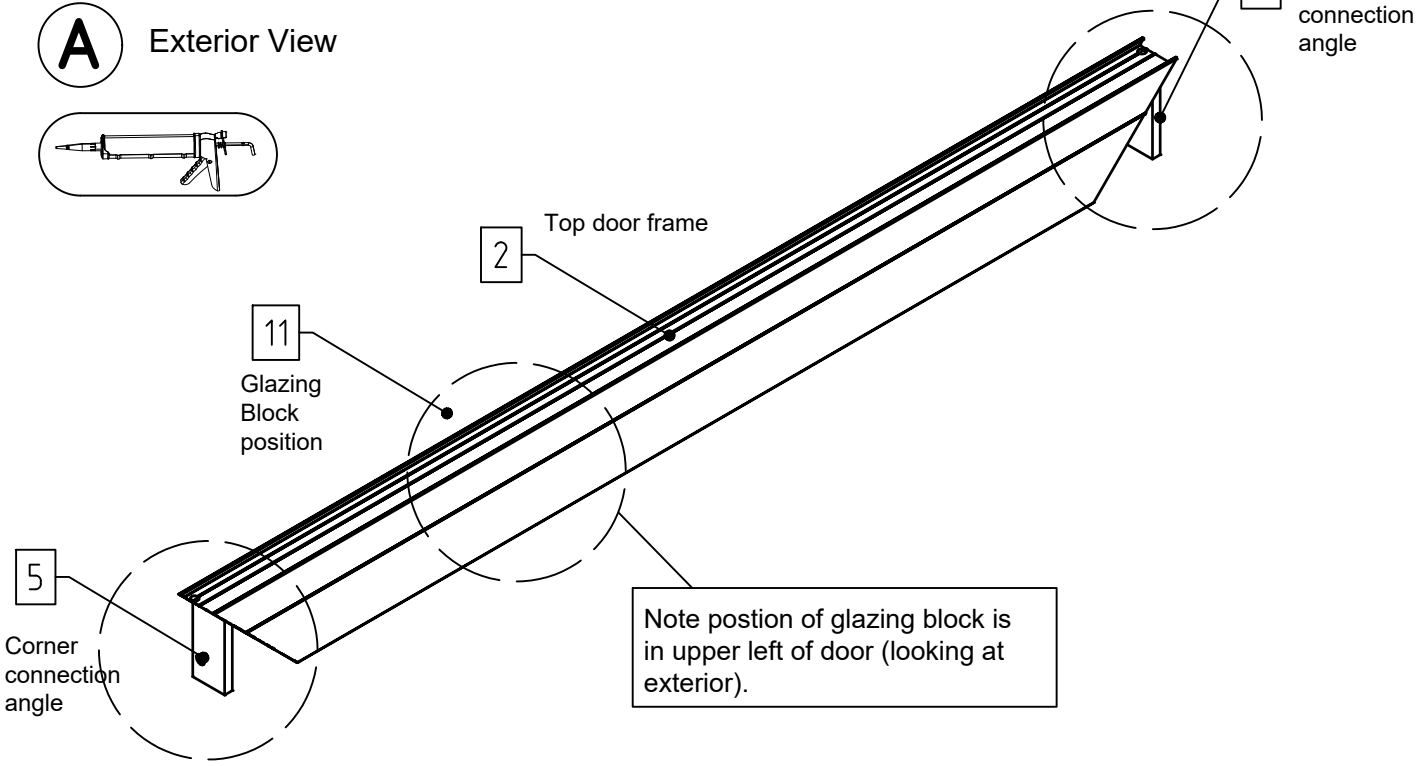
(repeat twice)

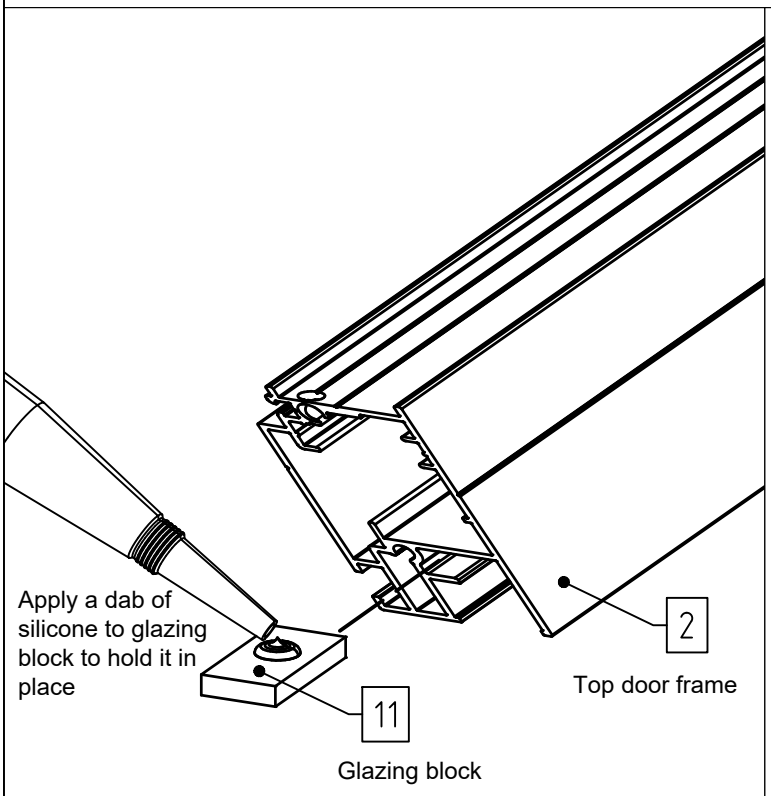
Note that screw goes into hole, through corner connector angle and into channel on bottom profile.



Panhead screw 4.2 x 70mm

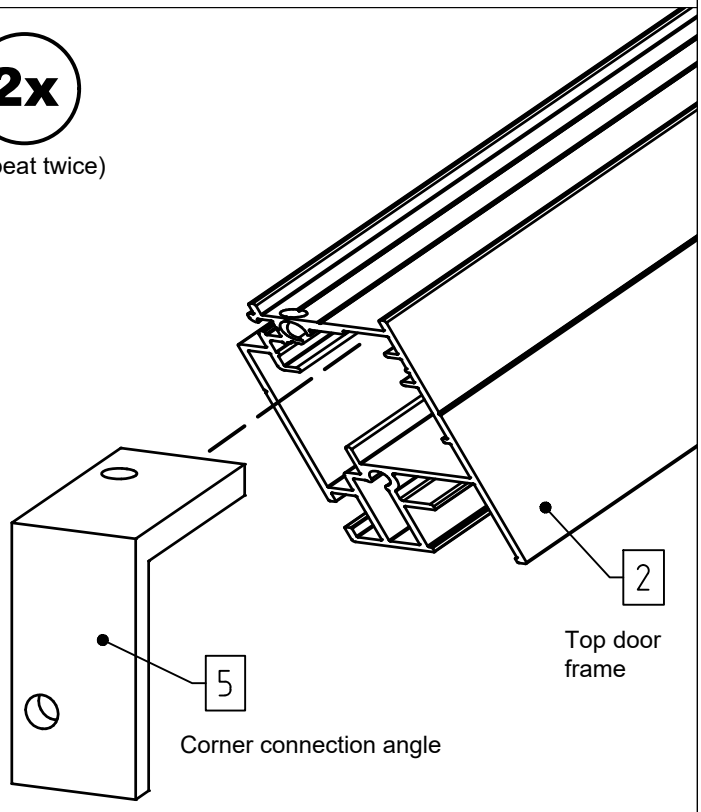
A Exterior View



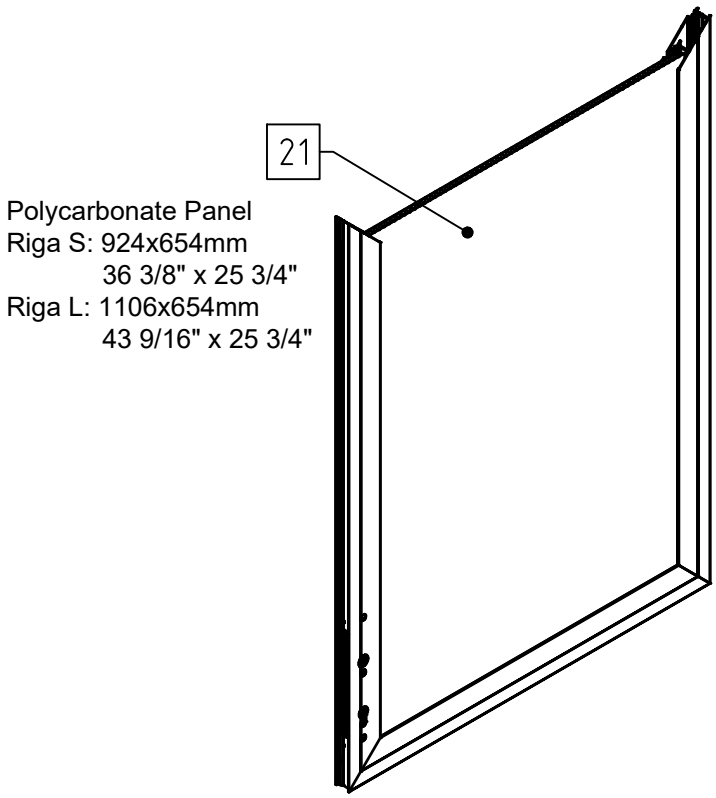


2x

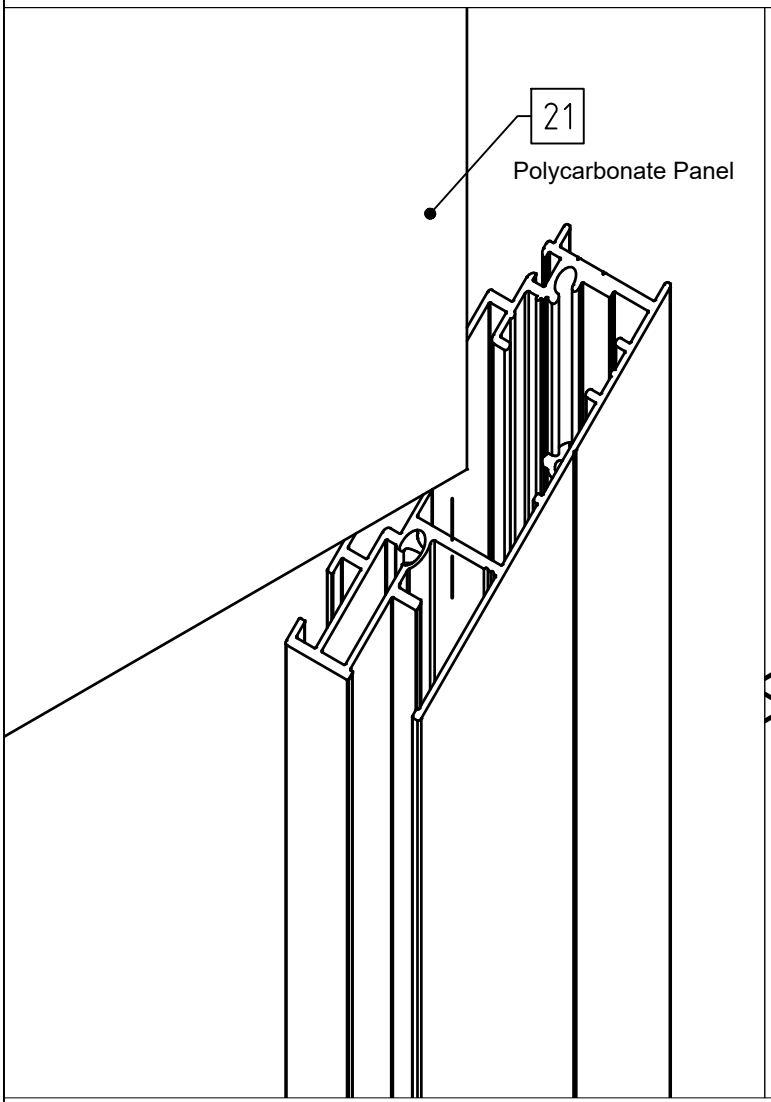
(repeat twice)

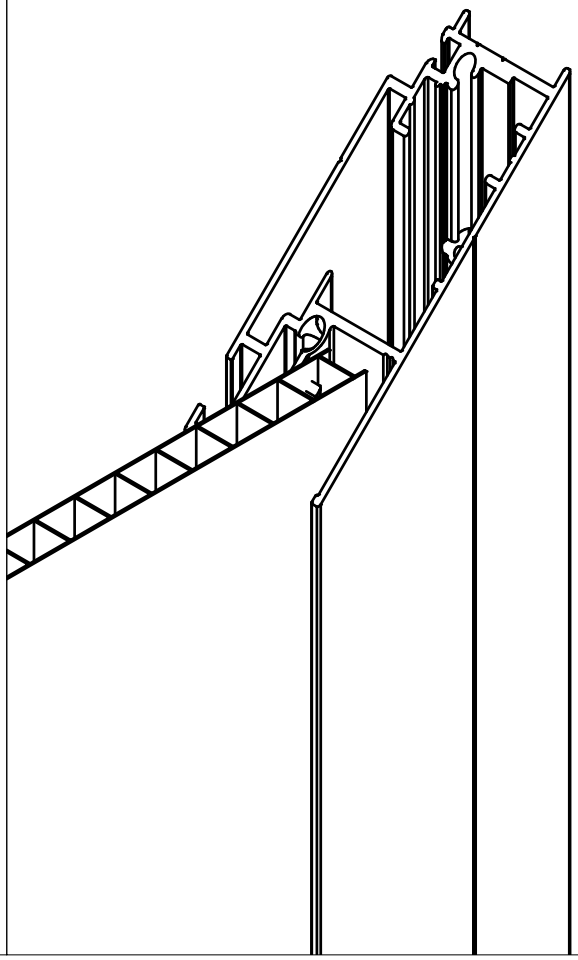


A Exterior View

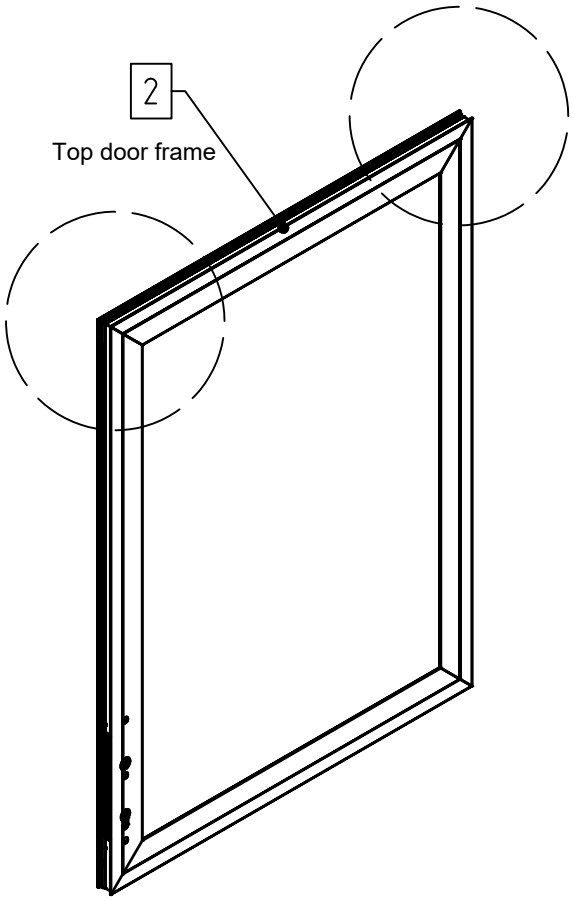


Polycarbonate Panel
Riga S: 924x654mm
36 3/8" x 25 3/4"
Riga L: 1106x654mm
43 9/16" x 25 3/4"

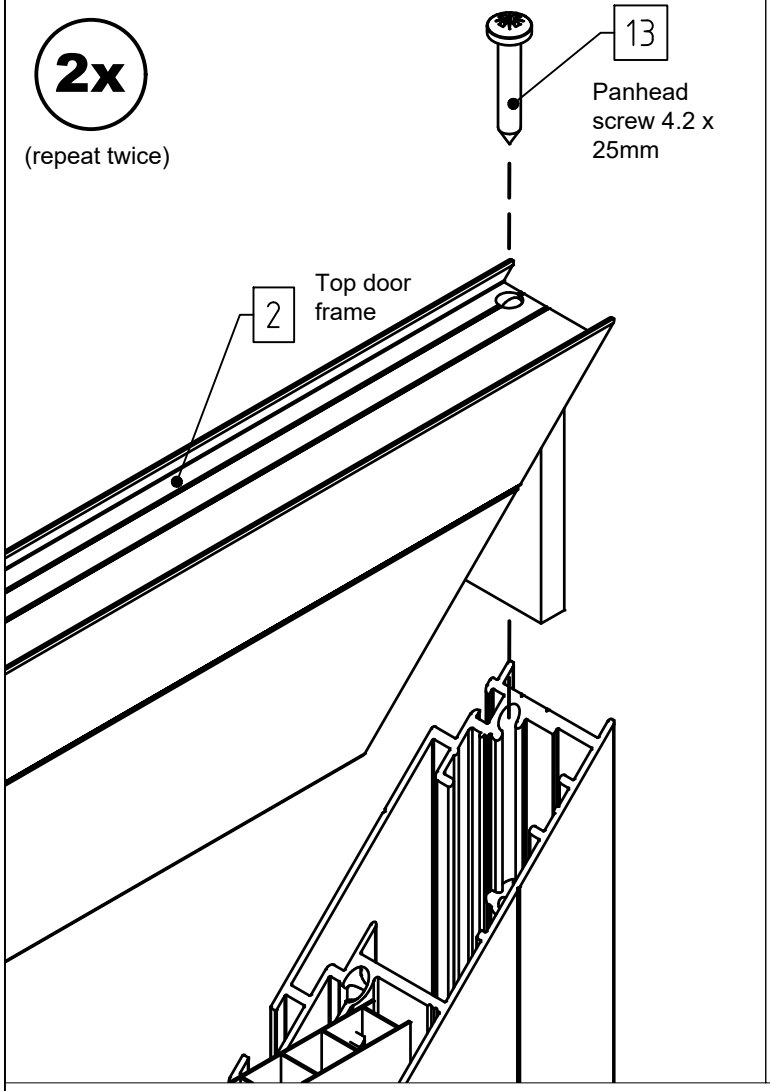




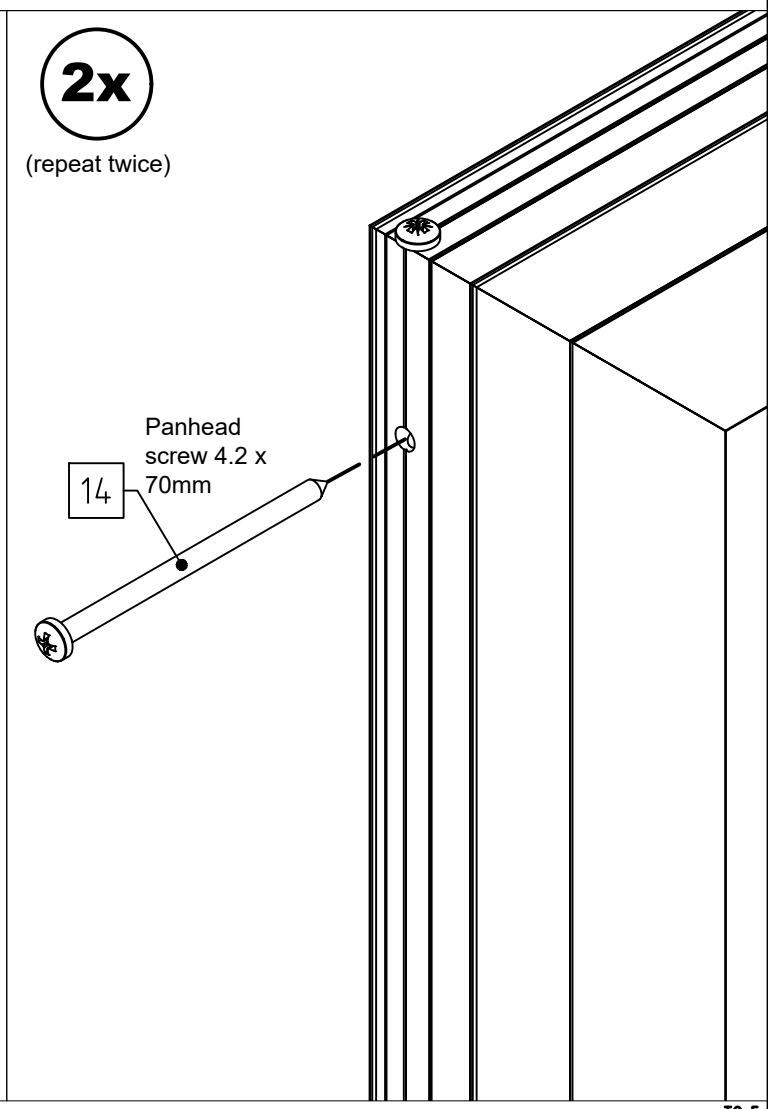
A Exterior View



2x
(repeat twice)



2x
(repeat twice)



TO-E

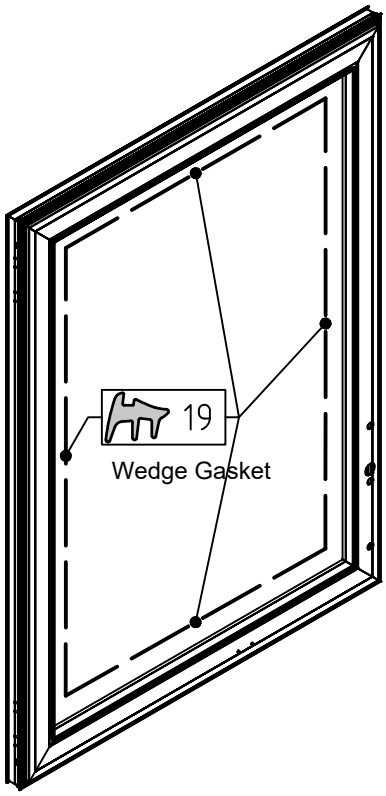
Reverse View! Flip door over!

Interior View

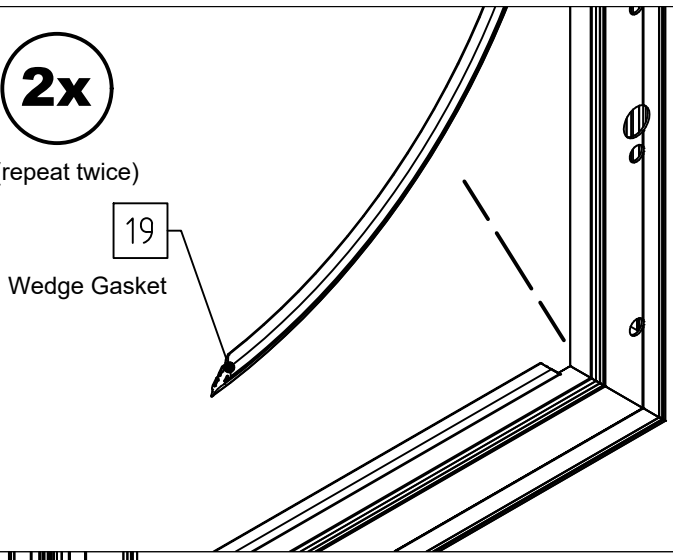
Wedge Gasket

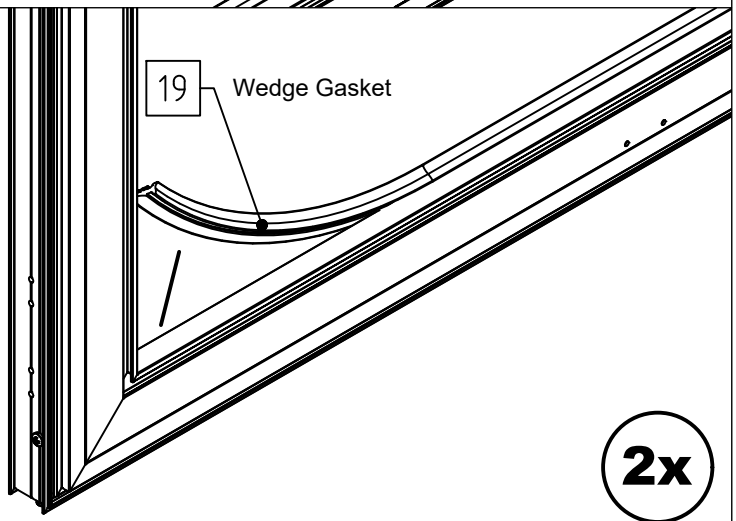
Look at all drawings closely to see orientation of wedge gasket. "Flaps" are against the polycarbonate panel. Cut ends of wedge gasket at an angle for best fit. It is helpful to cut the lengths of gasket slightly longer and compress it together as the gasket can shrink over time.

Wedge Gasket is inserted between polycabonate and framing around all four sides.

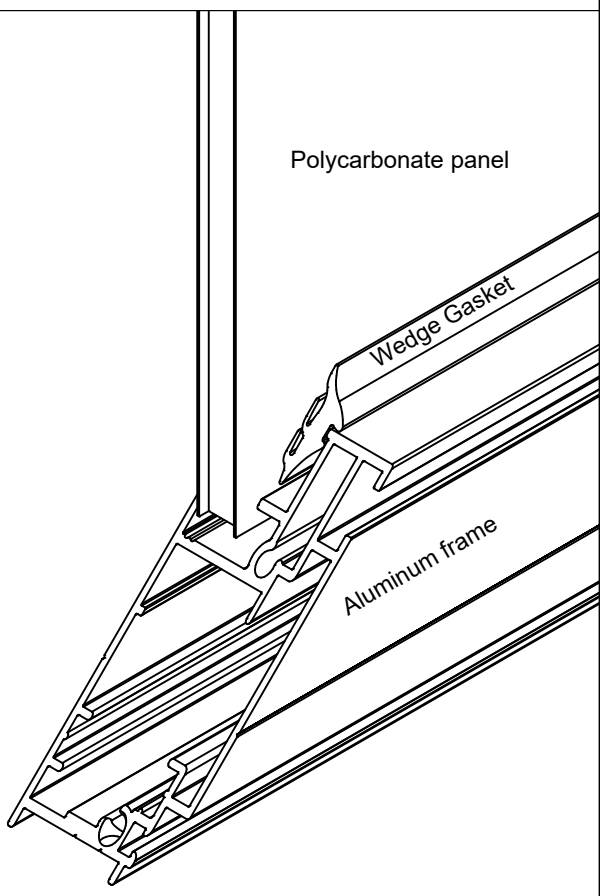


2x
(repeat twice)





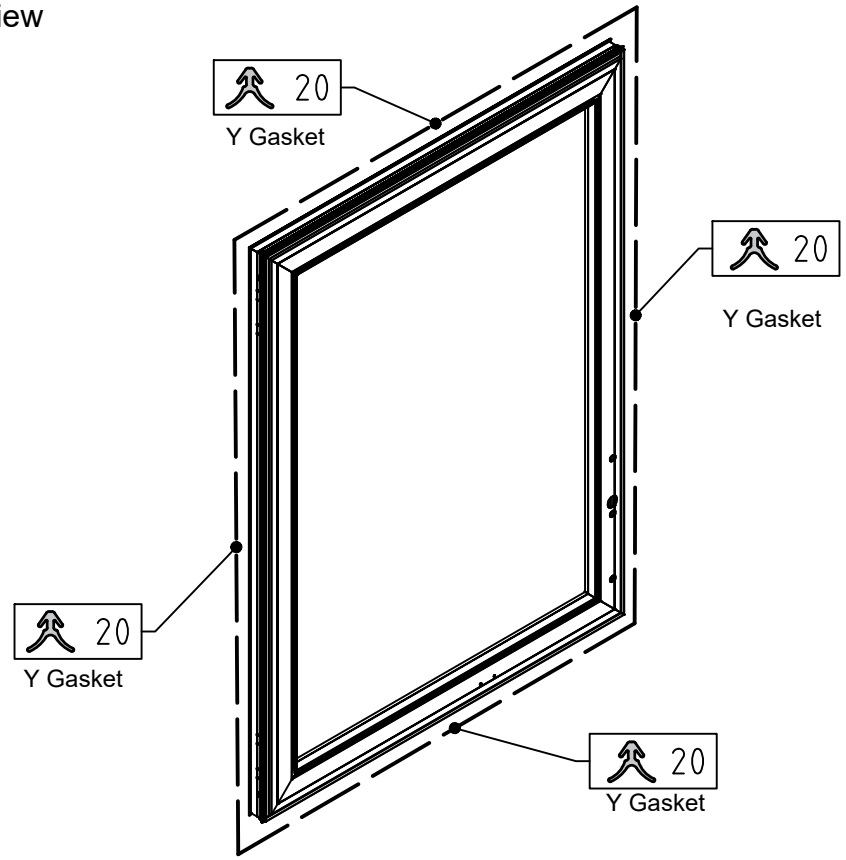
2x
(repeat twice)



VD (Simplified View)

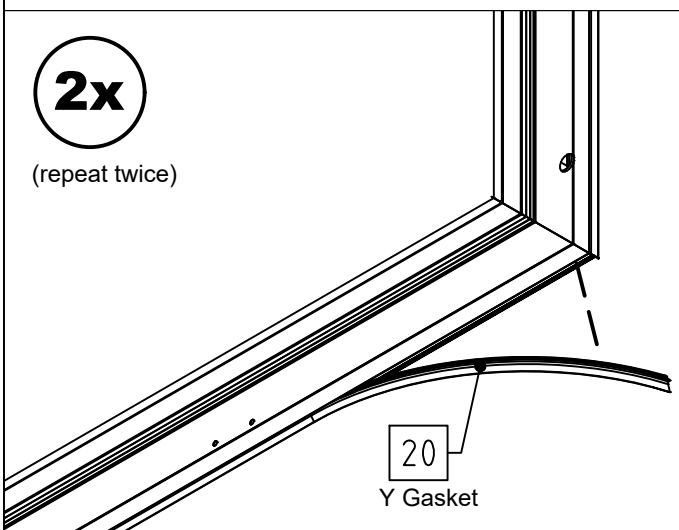
Interior View

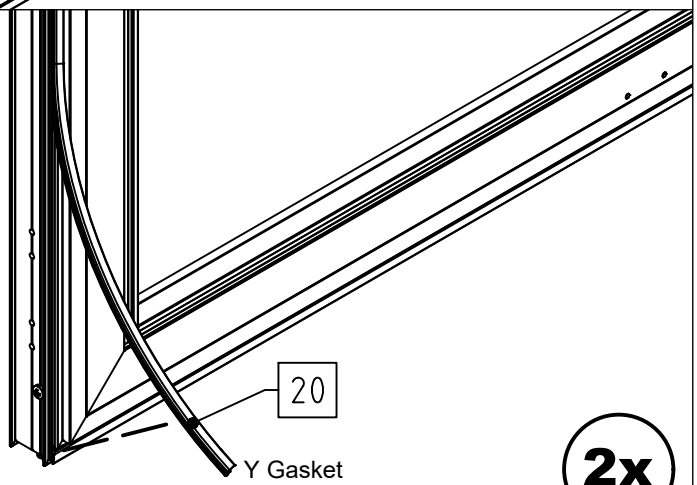
Y Gasket



2x

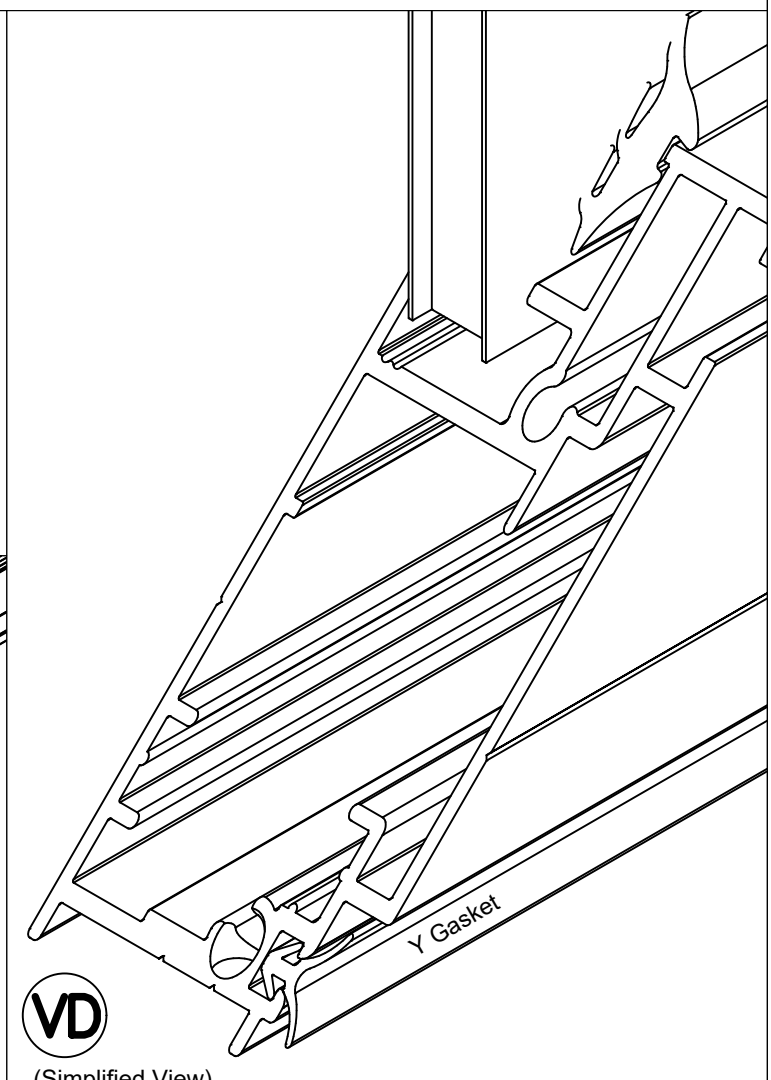
(repeat twice)





2x

(repeat twice)

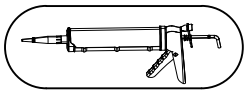


VD

(Simplified View)

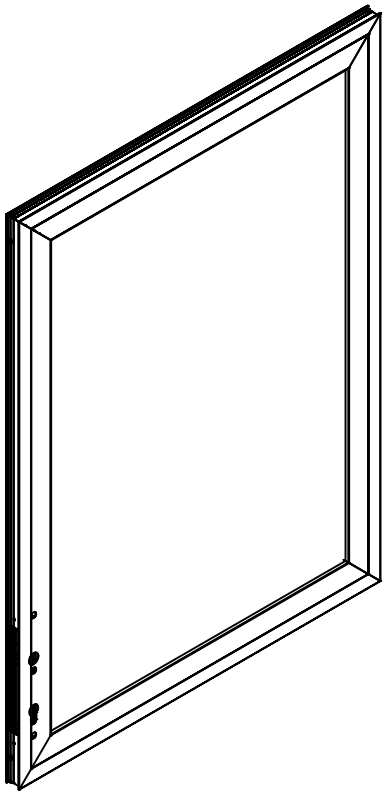
Reverse View! Flip Door Over!

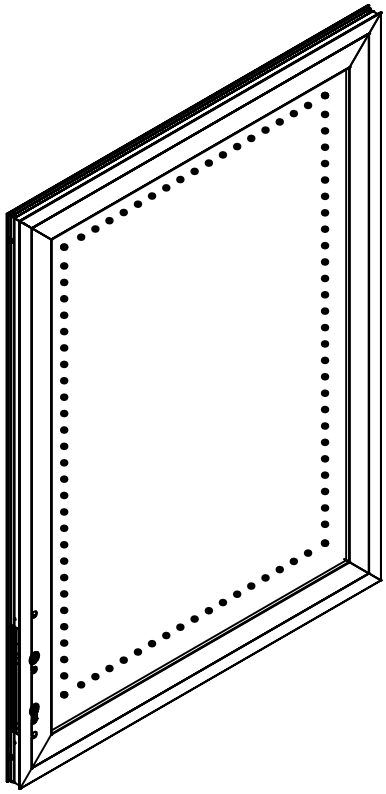
A Exterior View

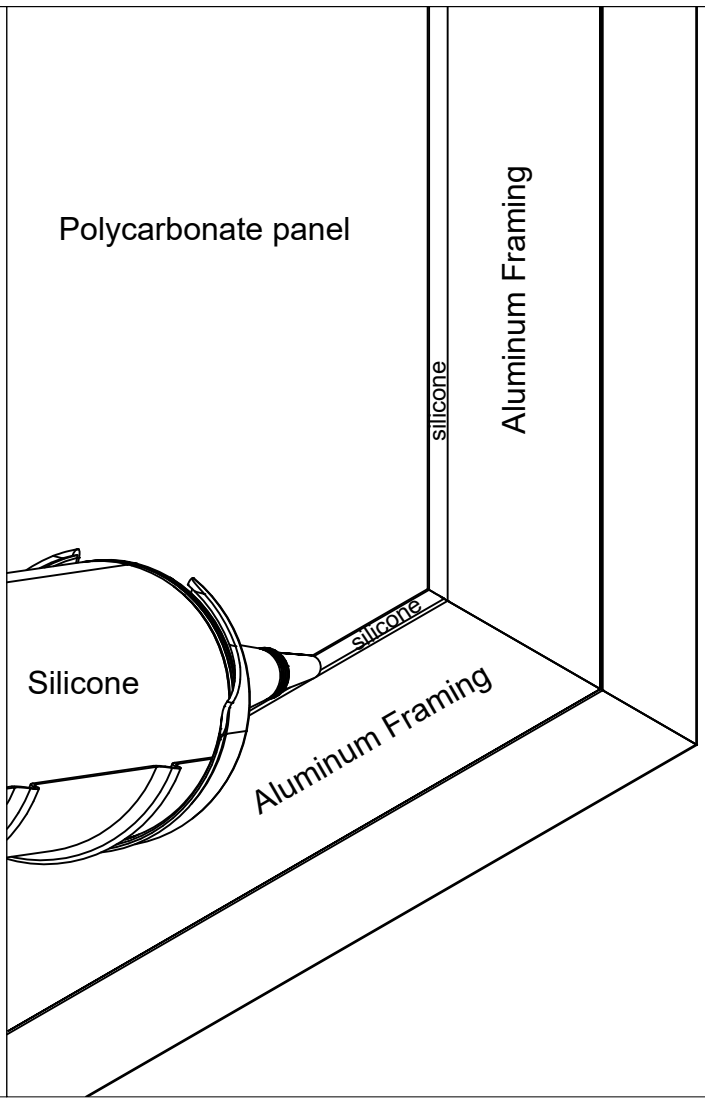


Dotted line shows application of silicone

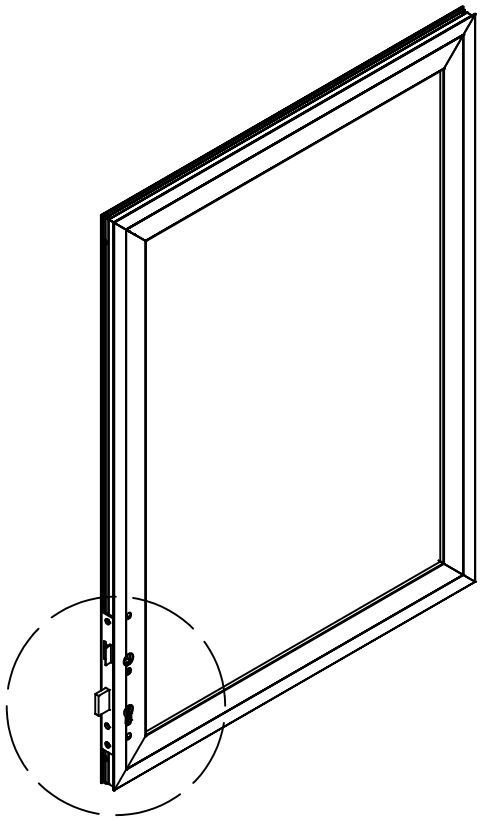
Apply a bead of silicone where the polycarbonate meets the aluminum framing along all four sides of the door as shown below.



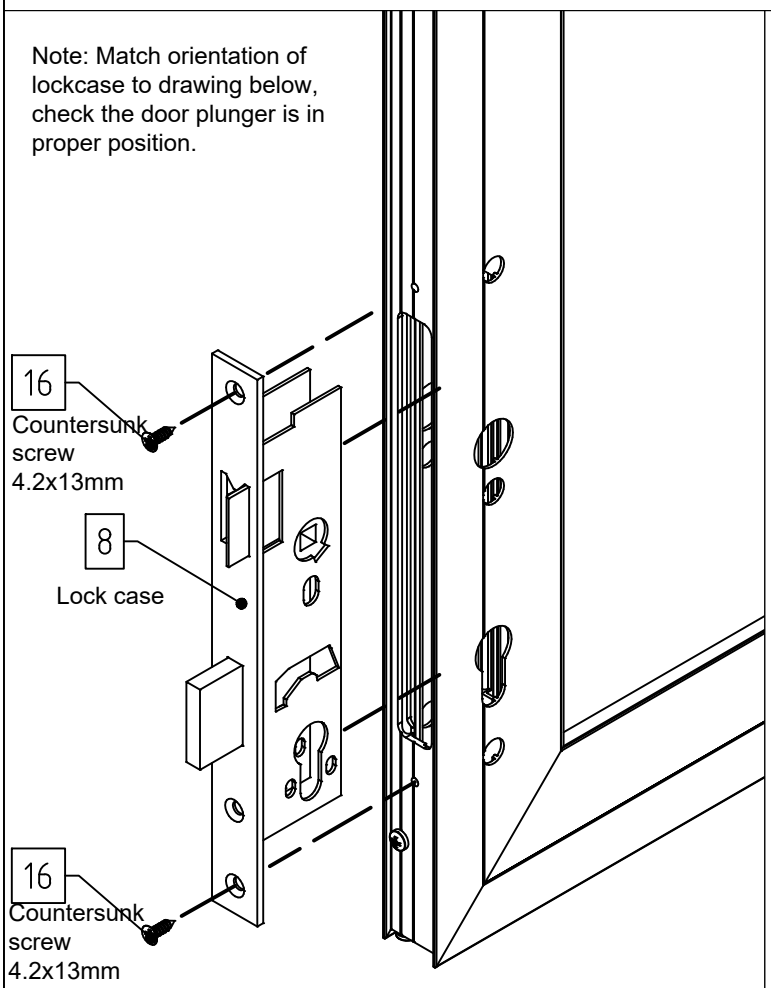


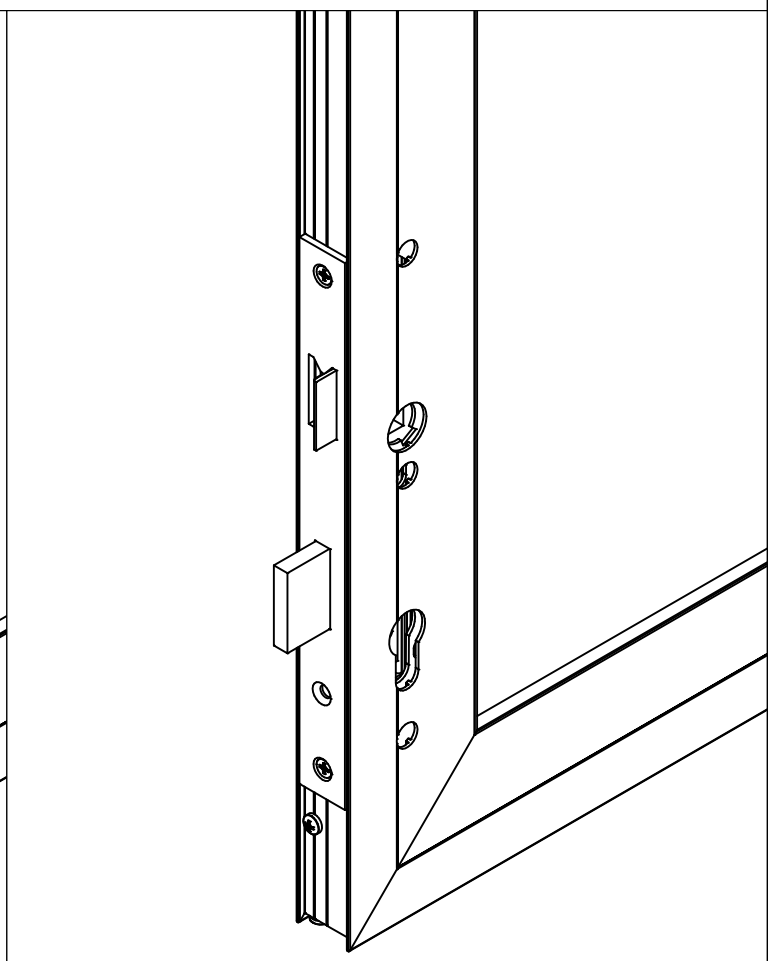


A Exterior View

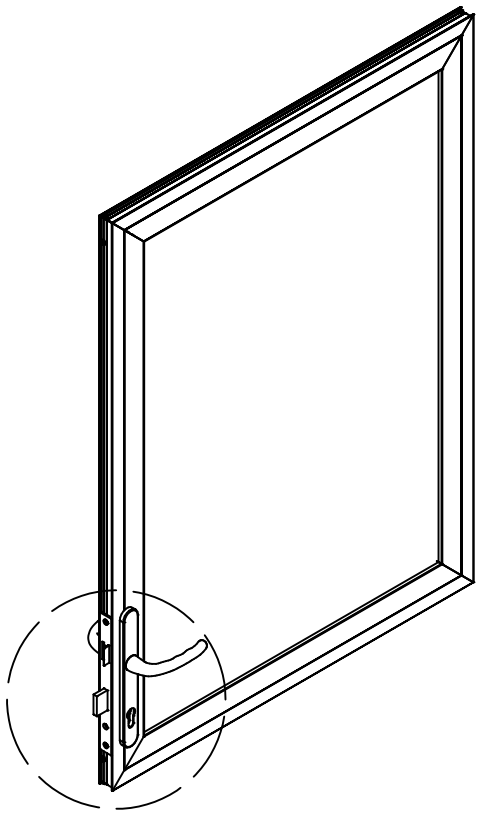


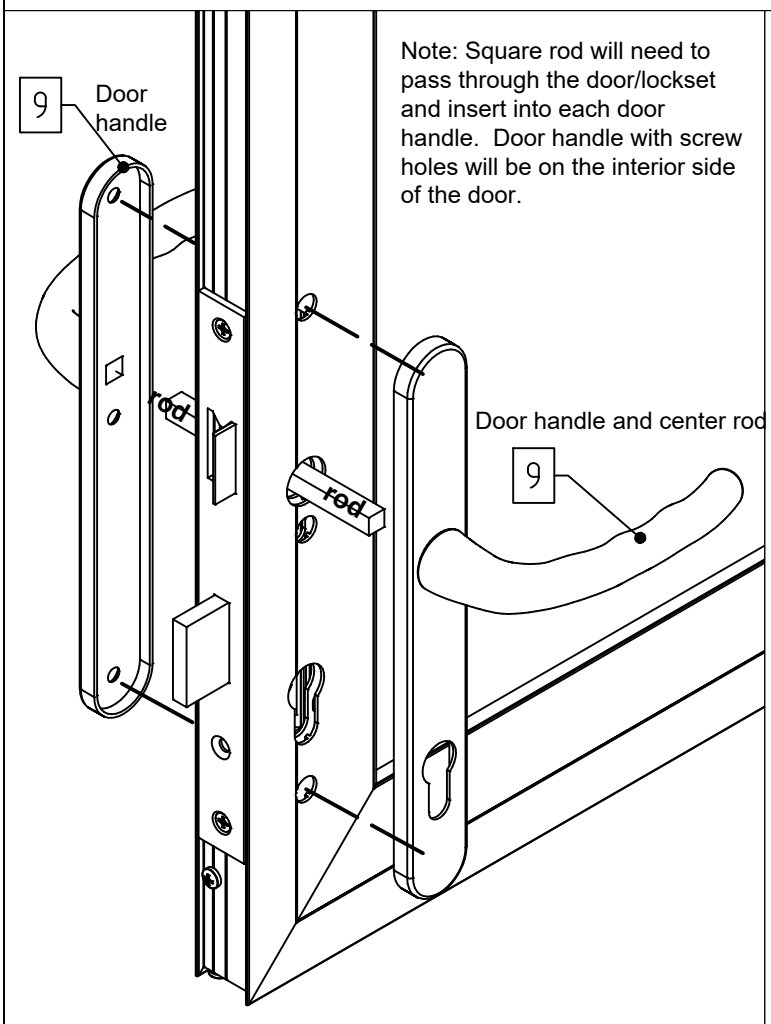
Note: Match orientation of lockcase to drawing below, check the door plunger is in proper position.



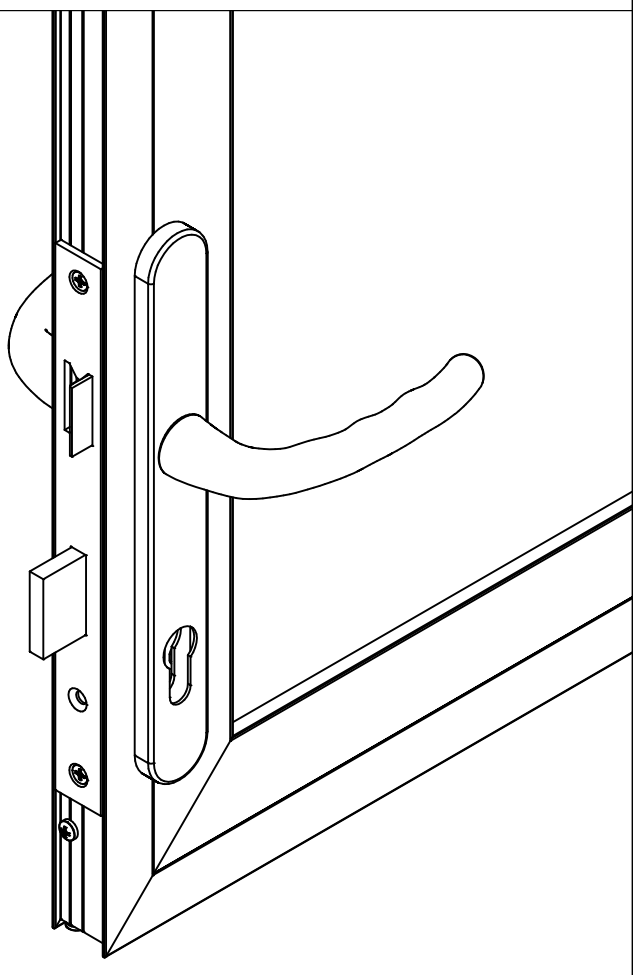


A Exterior View



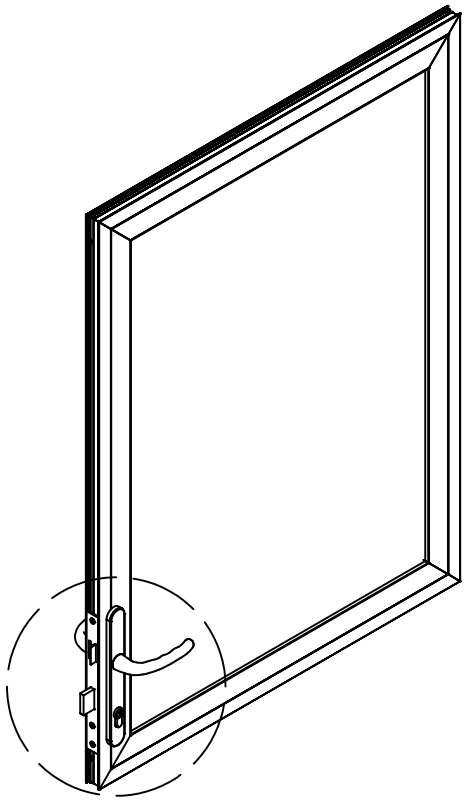


Note: Square rod will need to pass through the door/lockset and insert into each door handle. Door handle with screw holes will be on the interior side of the door.

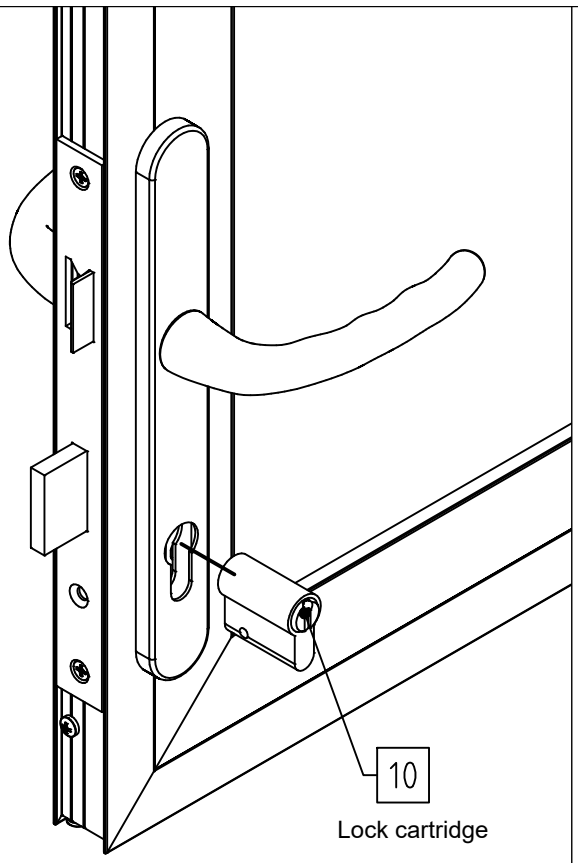


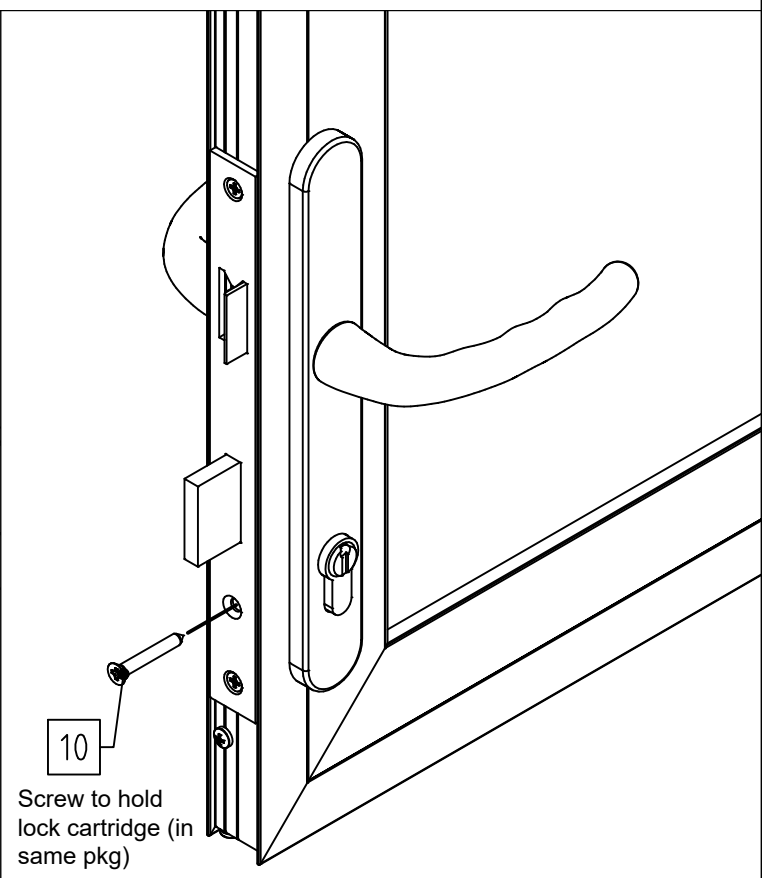
T0-J

A Exterior View

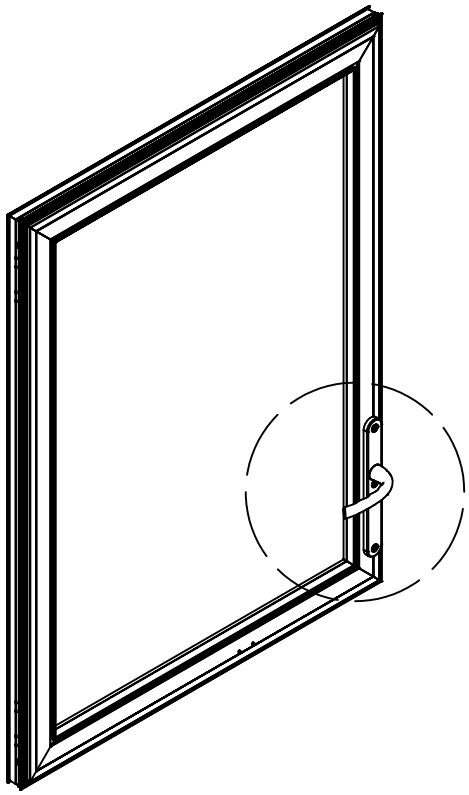


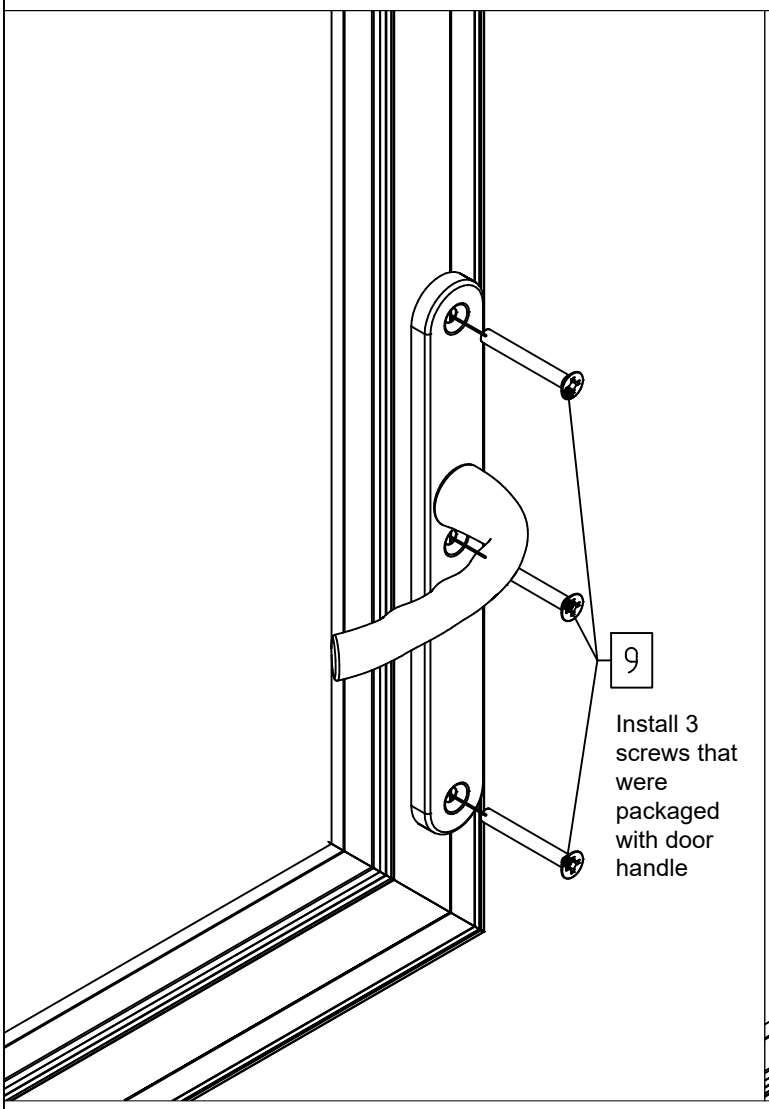
Insert lock cartridge





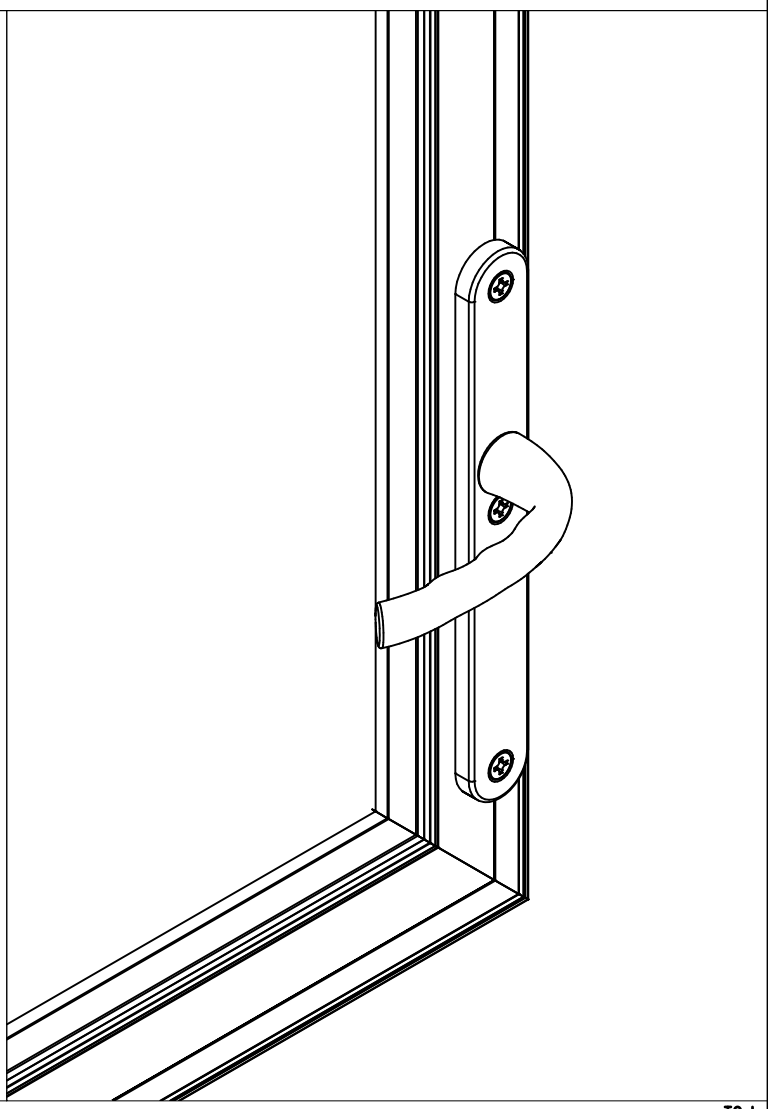
Interior View! Flip door over!





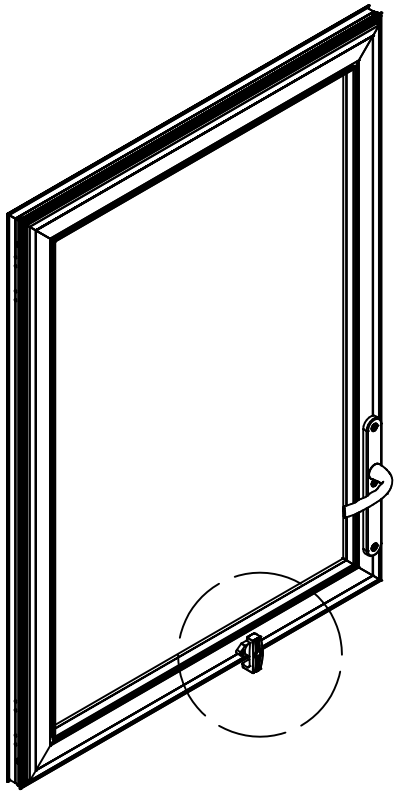
9

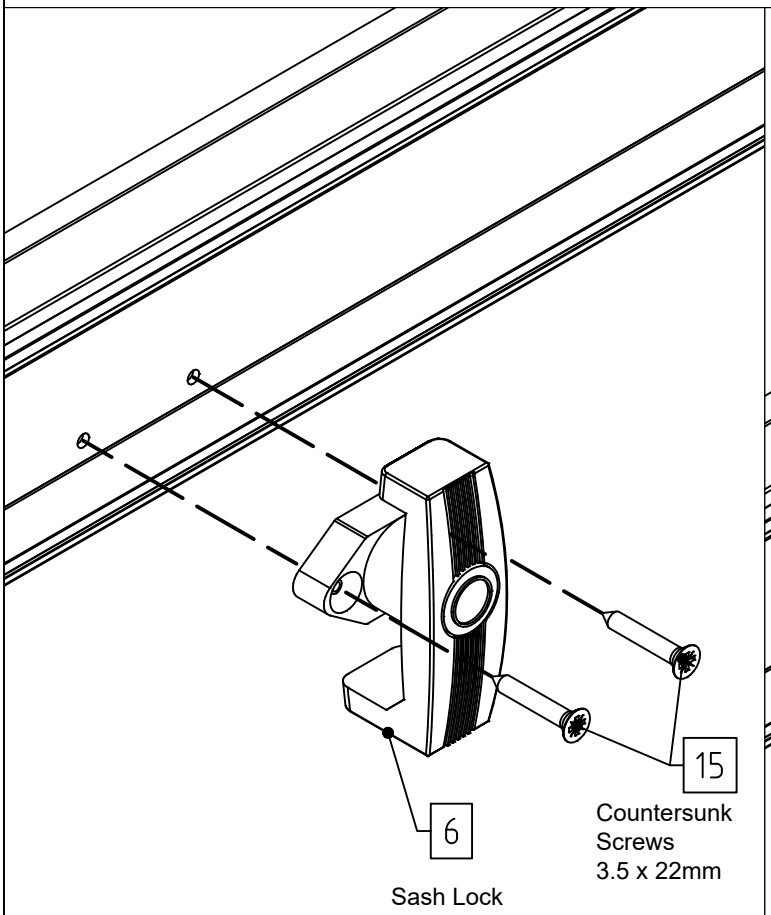
Install 3 screws that were packaged with door handle

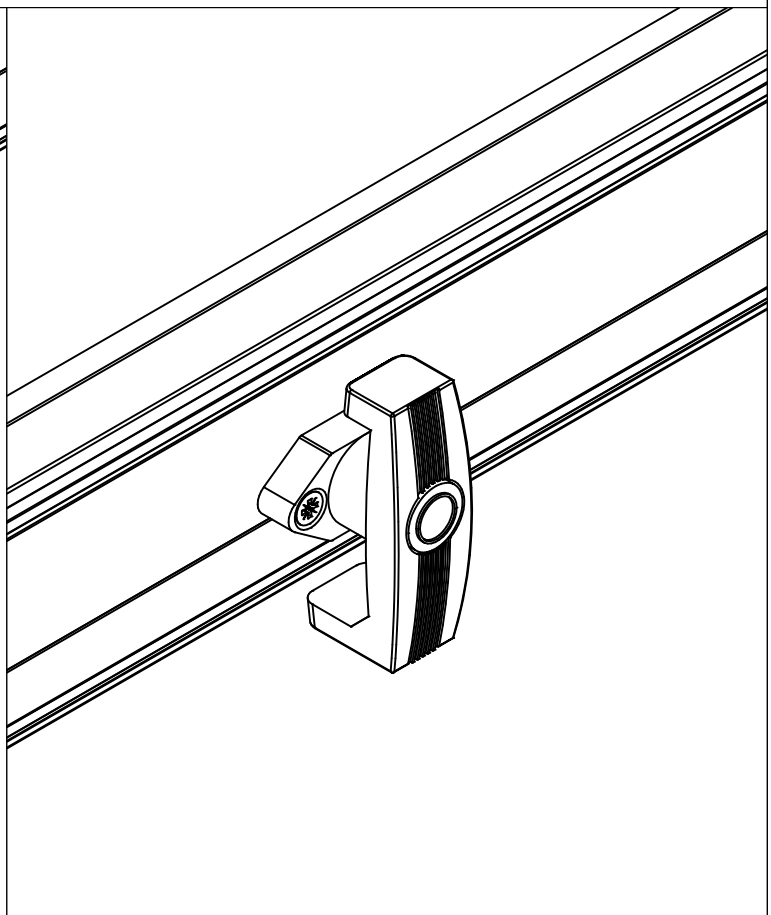


T0-L

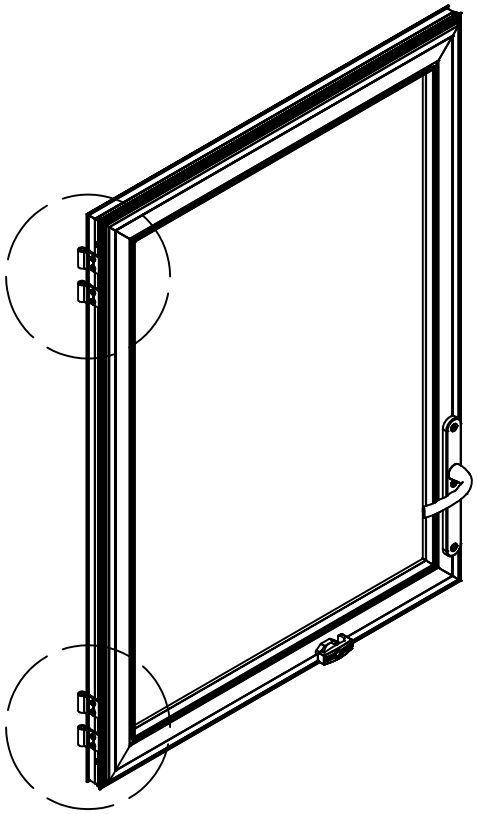
Interior View



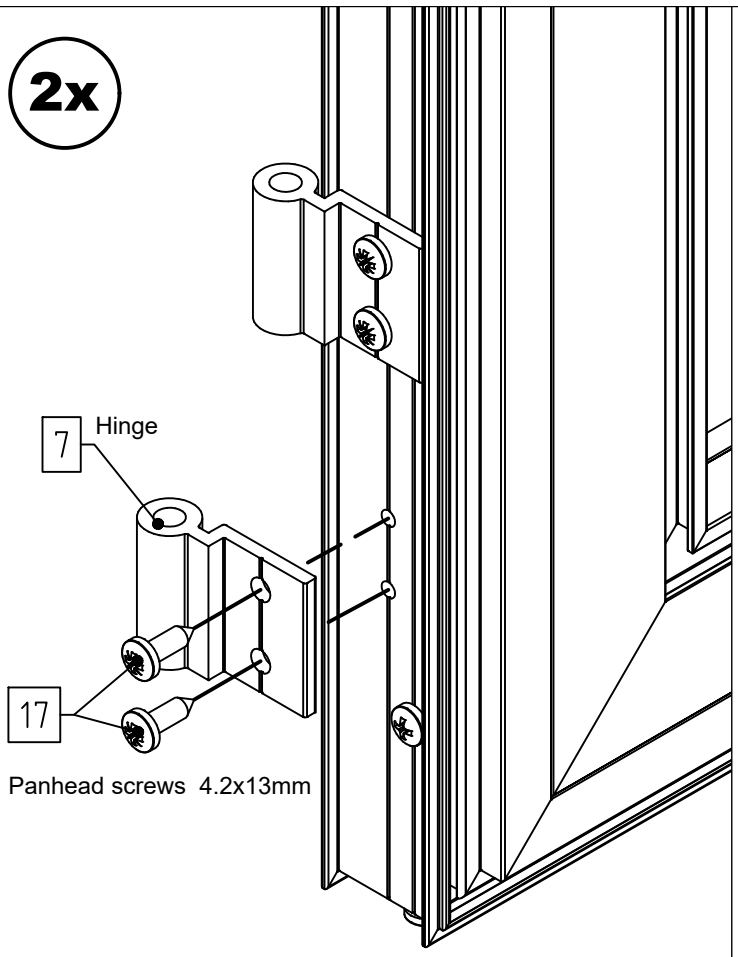


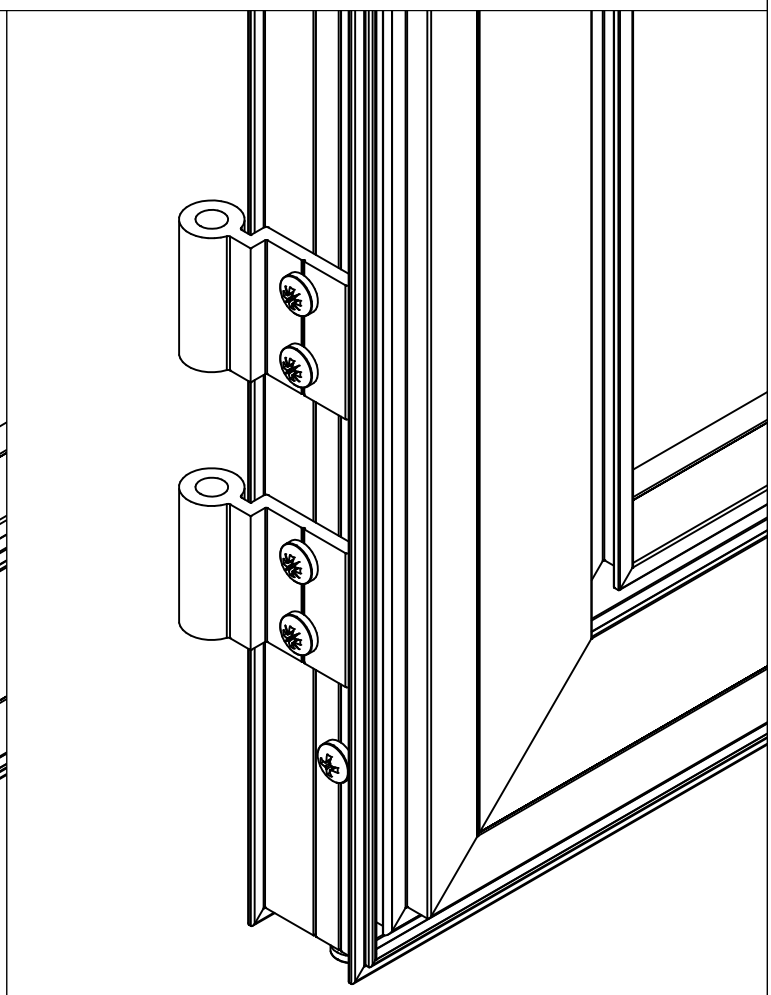


Interior View



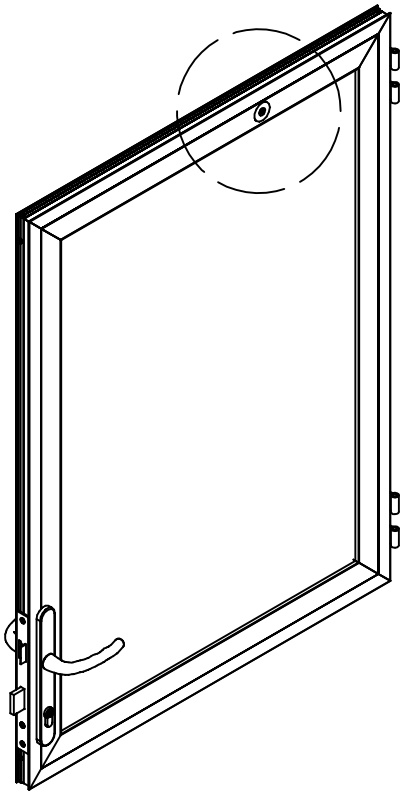
2x

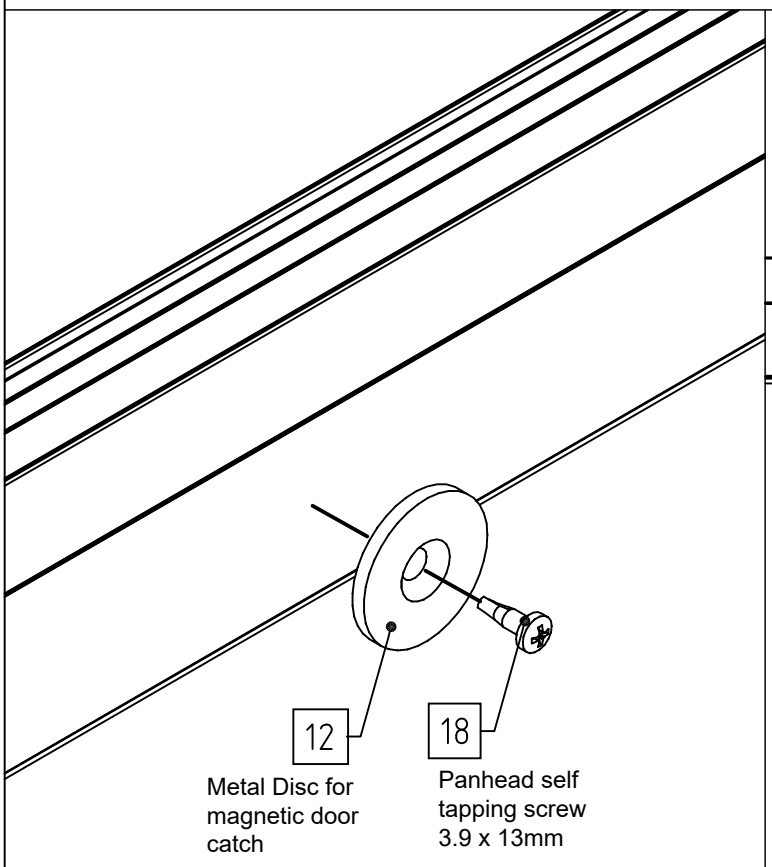




A Exterior View! Flip door over

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

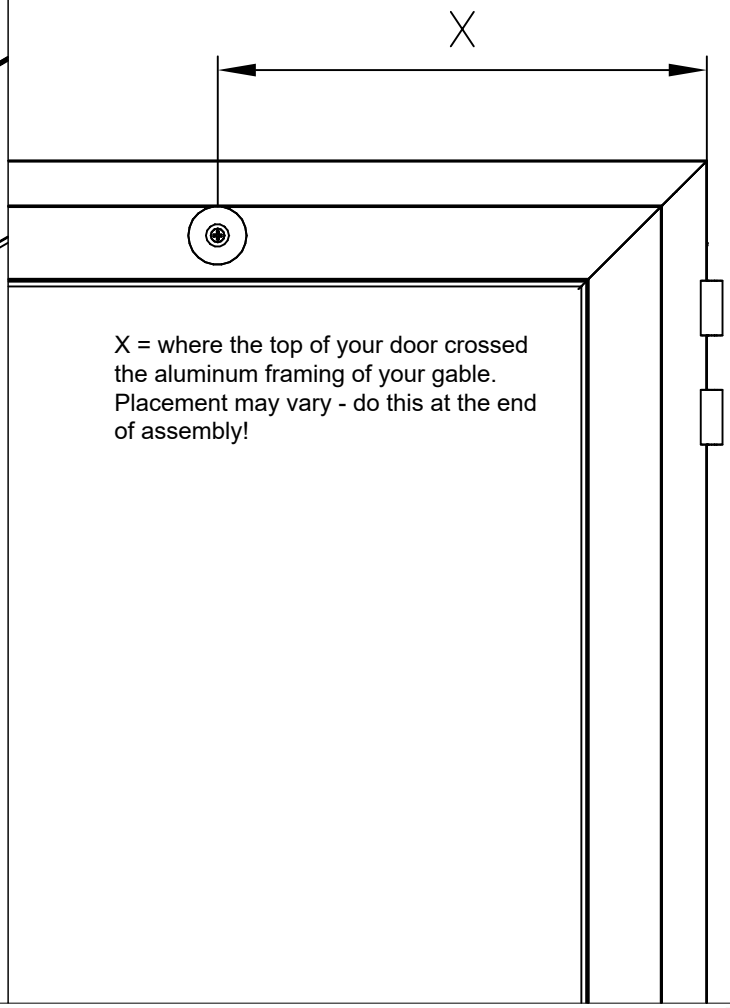




Metal Disc for magnetic door catch

Panhead self tapping screw 3.9 x 13mm

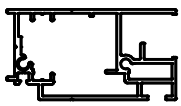
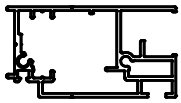
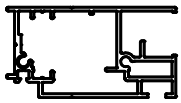
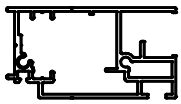
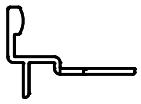
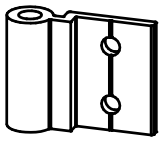
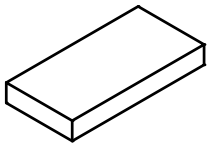
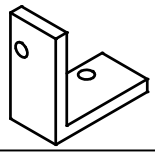
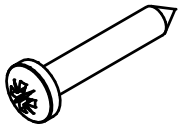
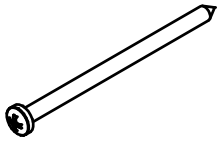
No existing hole exists for this screw - as placement may vary based on your site!



X = where the top of your door crossed the aluminum framing of your gable. Placement may vary - do this at the end of assembly!

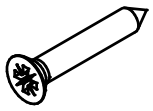
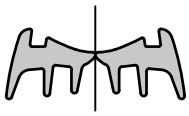
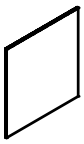
Lower Door for Front Gable

Packlist and Parts

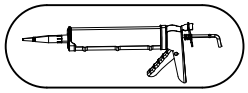
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P059–10–01–00–00–1	Bottom Door Frame (with drainage hole)	1	748 mm 29 1/16"
2		P059–06–01–00–00–1	Top Door Frame	1	748 mm 29 1/16"
3		P059–02–01–00–00–1	Vertical Door Frame (with sash lock holes)	1	790 mm 31 1/8"
4		P059–03–01–00–00–1	Vertical Door Frame (hinge side w/ hinge holes)	1	790 mm 31 1/8"
5		P061–01–01–00–00–1	Upper flange	1	742 mm 29 3/16"
6		9999000023	Sash Lock	1	
7		9999000716	Hinge	4	30 mm 1 3/16"
8		9999001240	Glazing Block	2	
9		9999000065	Corner connection angle	4	
10		9999000144	Panhead Screw 4.2 x 13mm (screws for hinges and to attach upper flange)	11	DIN 7981
11		9999000596	Panhead Screw 4.2 x 25mm (to connect corners of doors)	4	DIN 7981
12		9999000662	Panhead Screw 4.2 x 70mm (to connect corners of doors)	4	DIN 7981

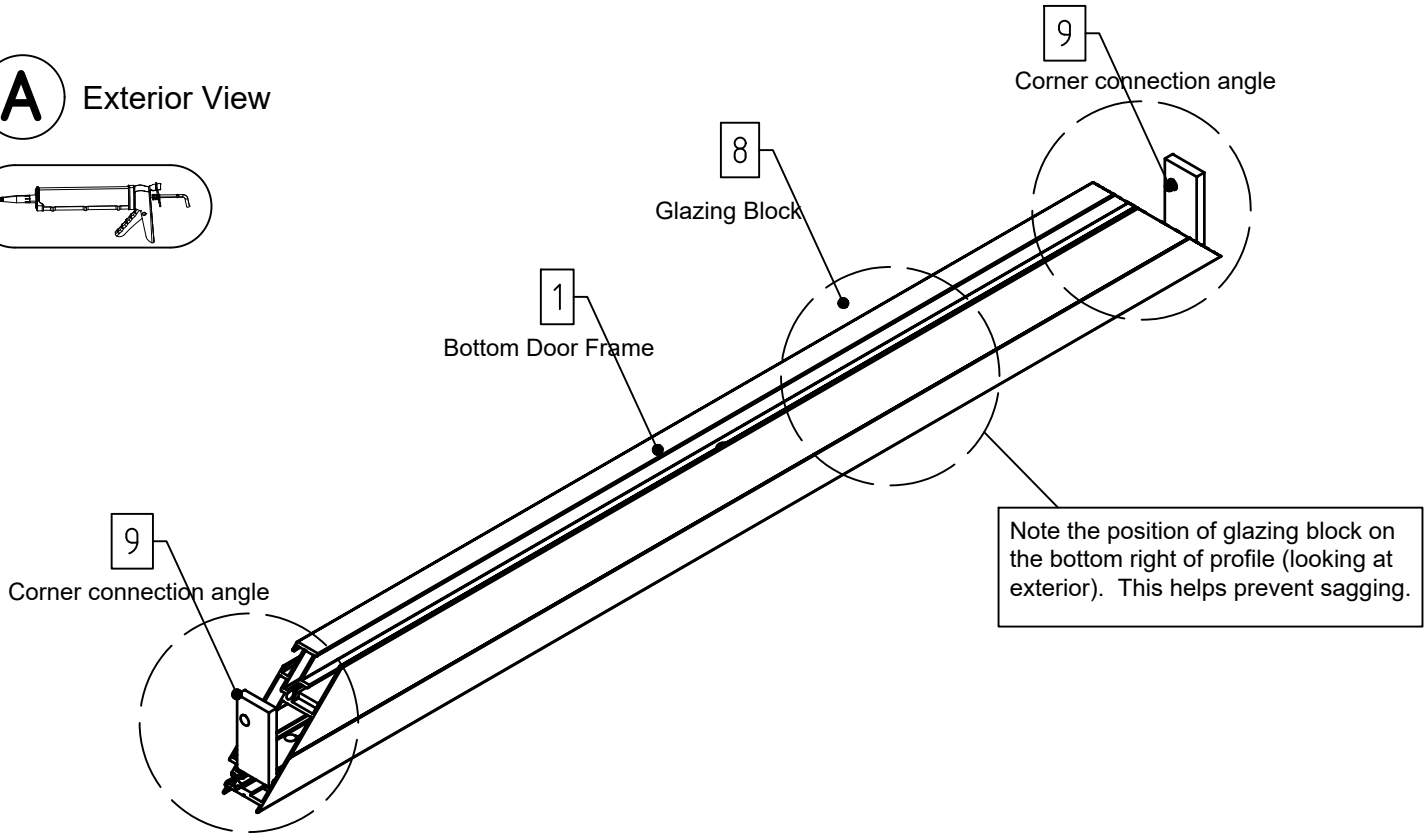
Lower Door for Front Gable

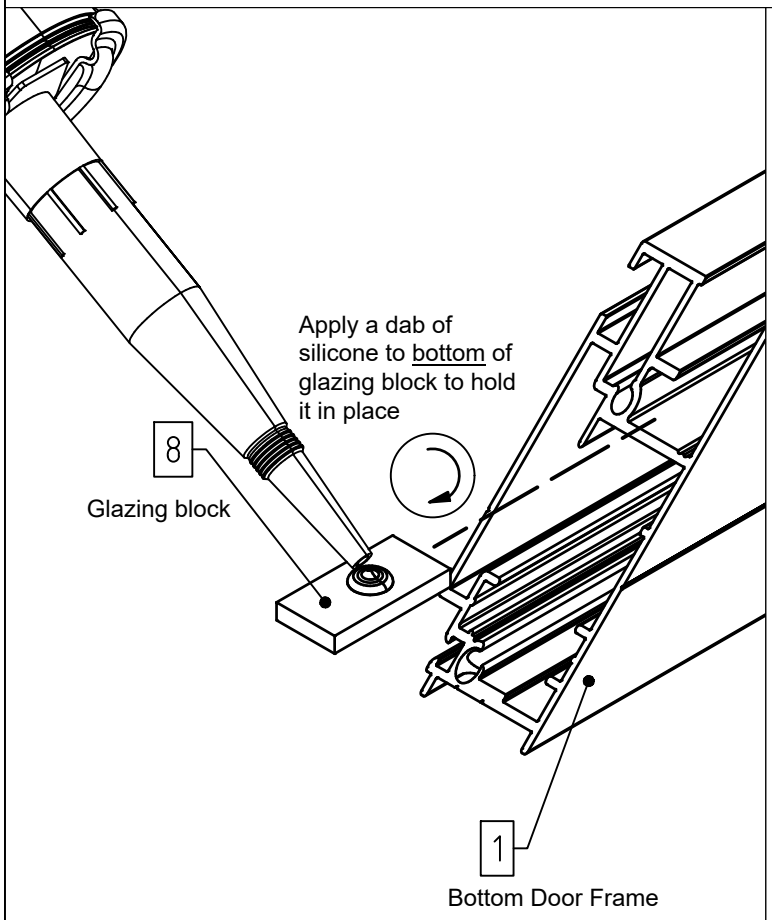
Packlist and Parts

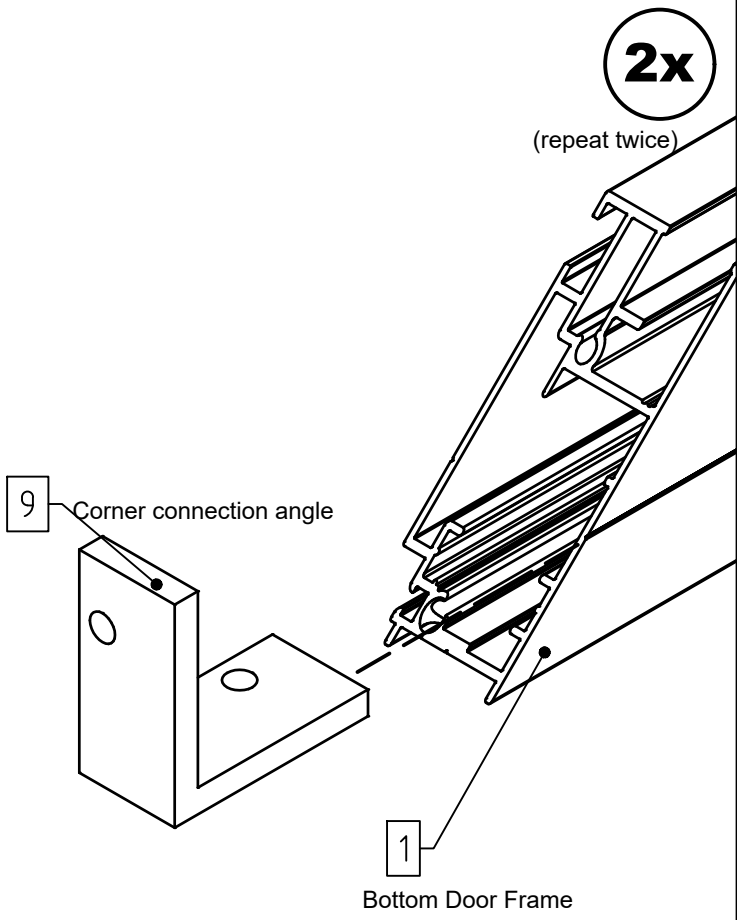
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000152	Countersunk Screw 3.5 x 22mm (screws for sash lock)	2	DIN 7982
14		9999000120	Wedge Gasket 6-8mm PULL APART AT MIDDLE	1,7 lfdm. 66 15/16" (total in dbl strand)	Pull apart at middle to make two strands
15		9999000032	Y Gasket	2,8 lfdm. 110 1/4"	
16			Polycarbonate Panel 654x696mm 25 3/4" x 27 3/8"	1	
17					
18					
19					
20					
21					
22					
23					
24					

A Exterior View

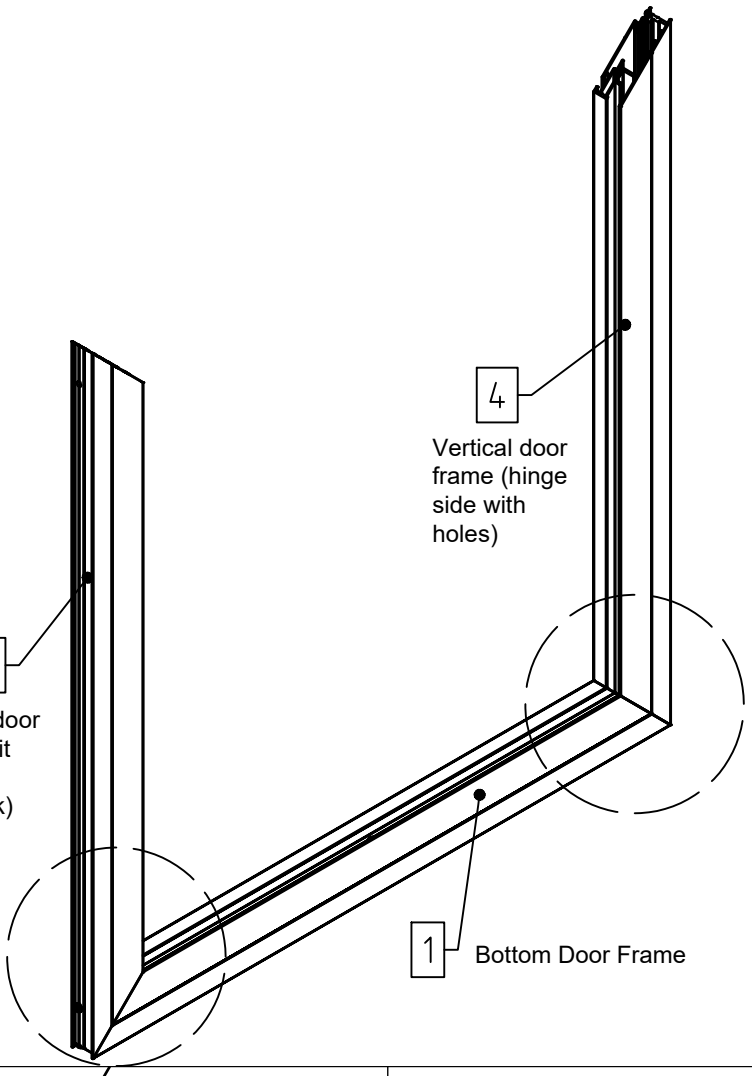




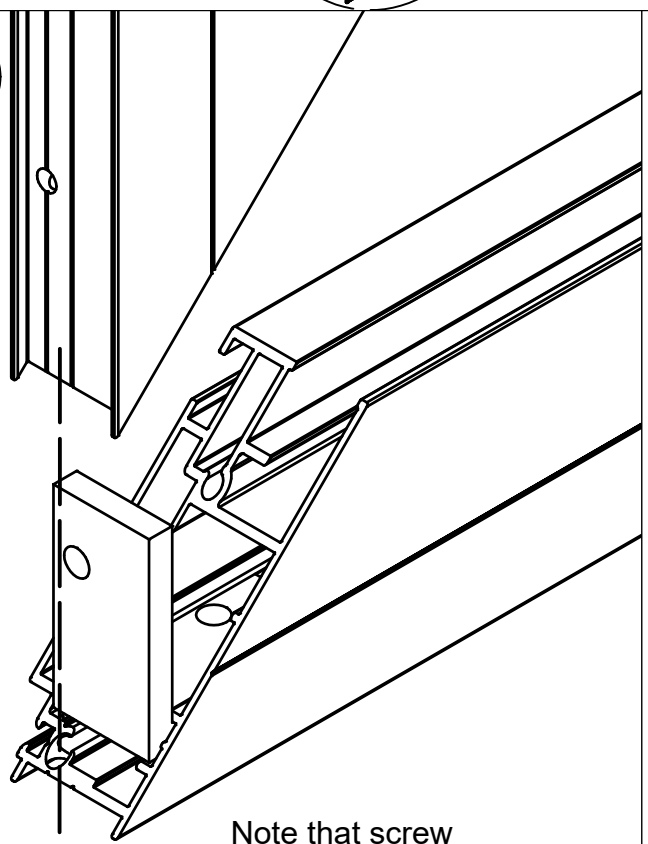




A Exterior View



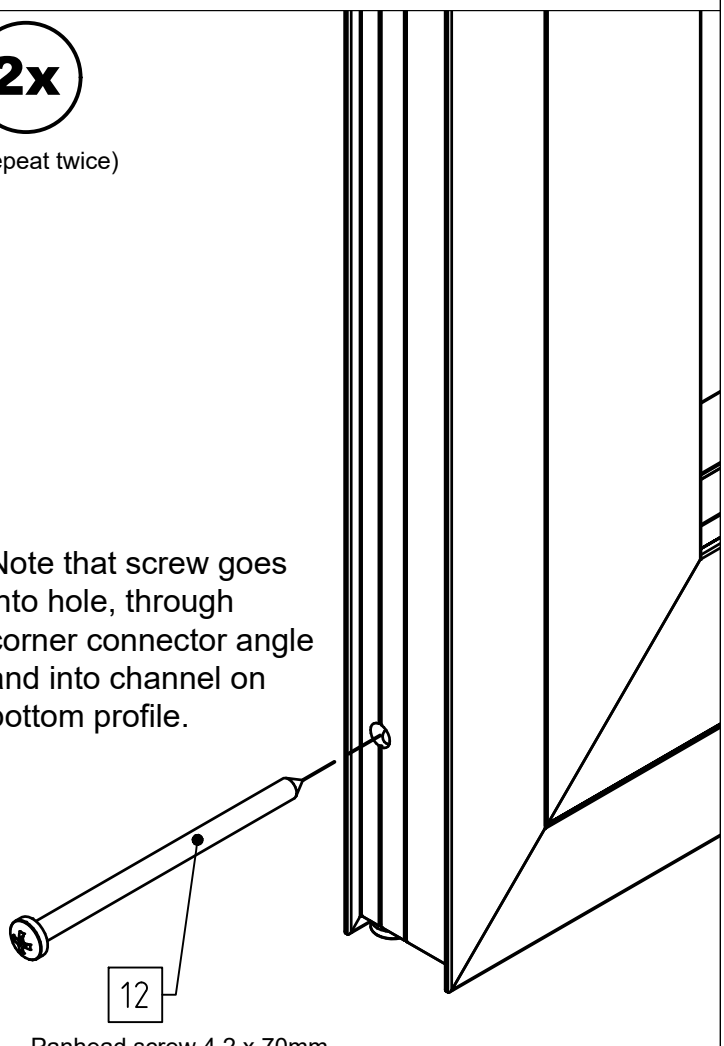
2x
(repeat twice)



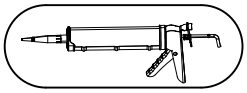
Note that screw goes through hole on bottom profile and into channel on vertical profile

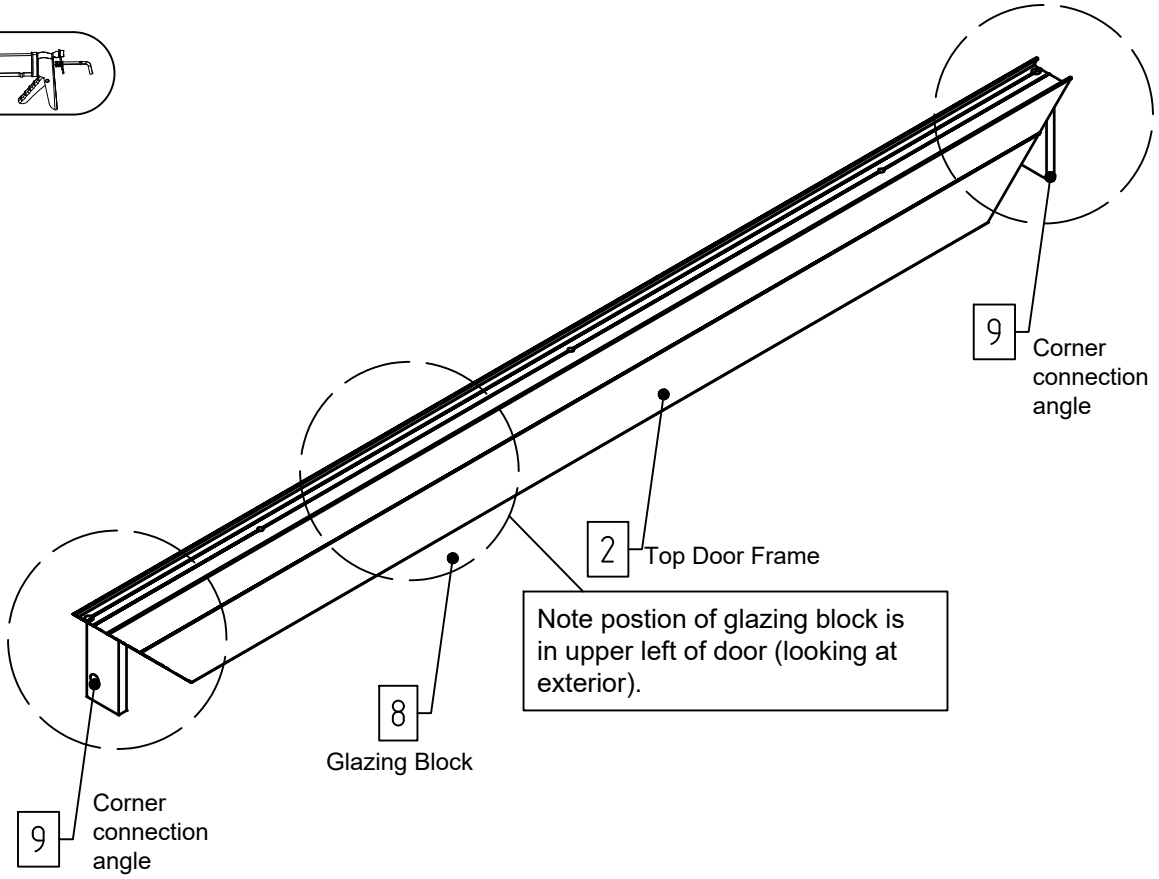
2x
(repeat twice)

Note that screw goes into hole, through corner connector angle and into channel on bottom profile.

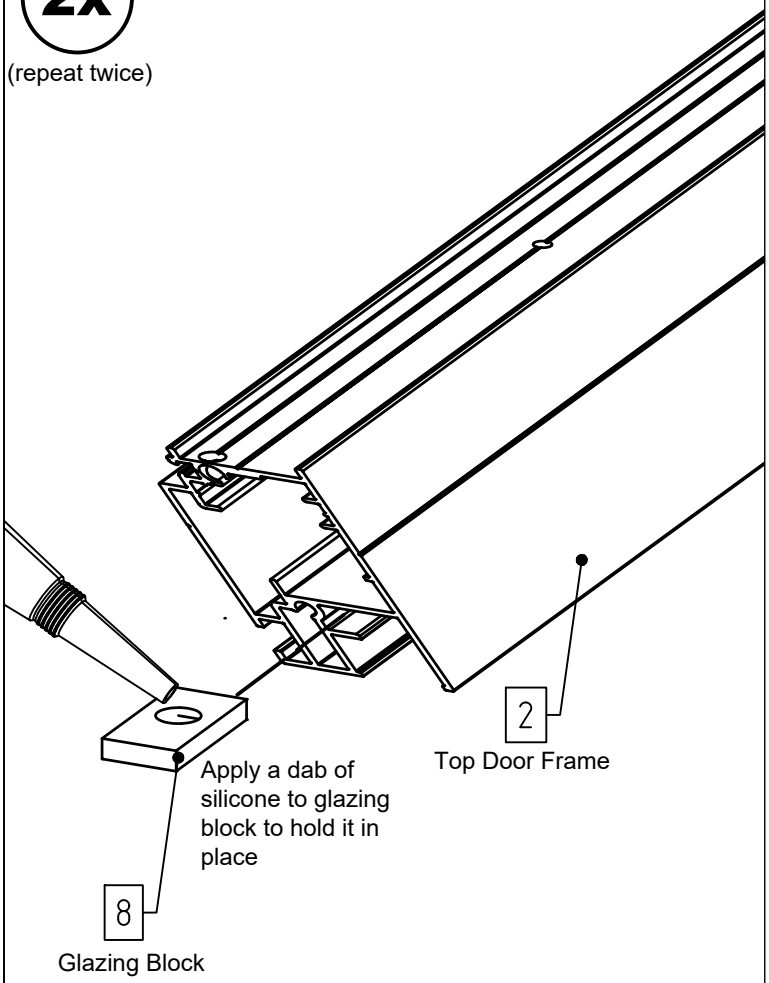


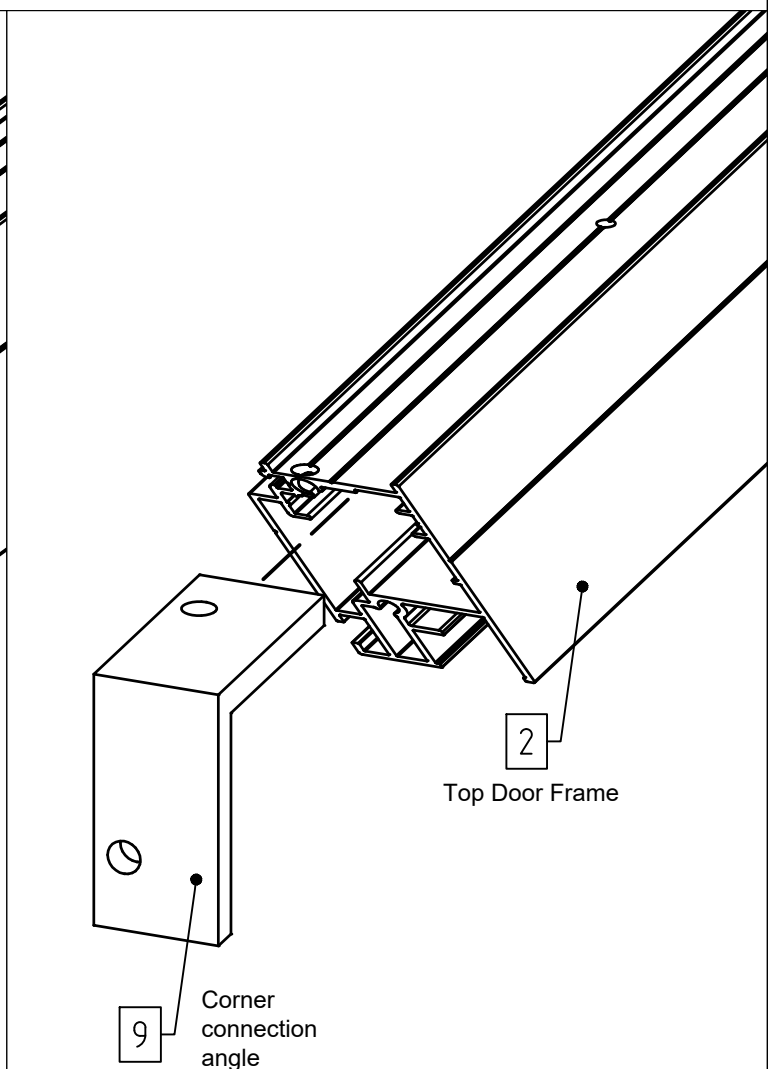
A Exterior View



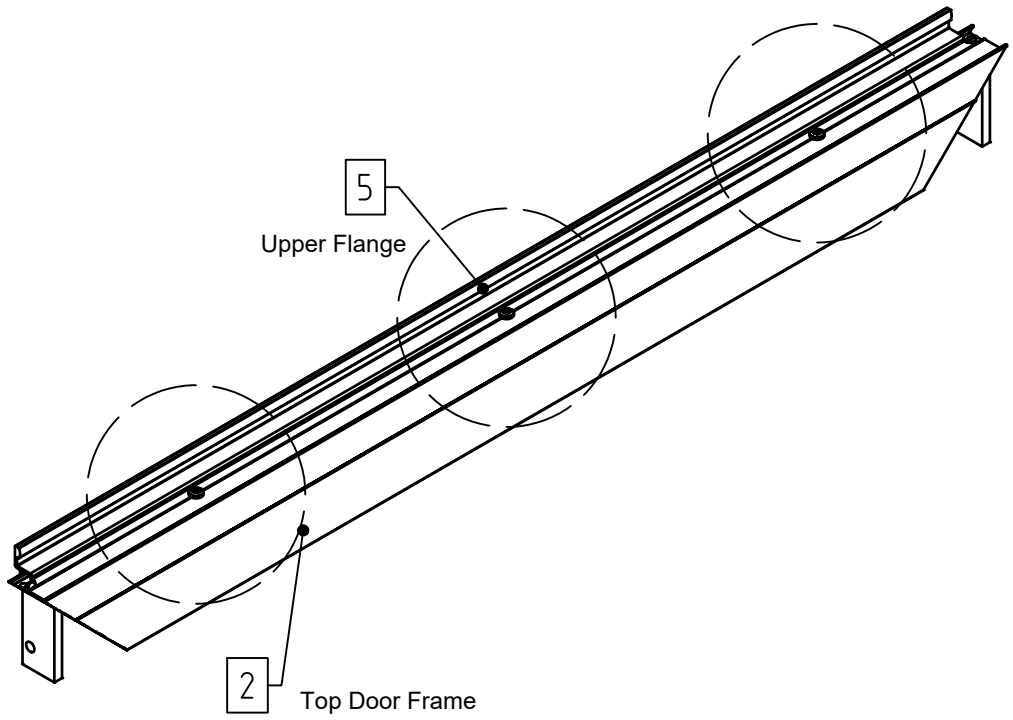


2x
(repeat twice)



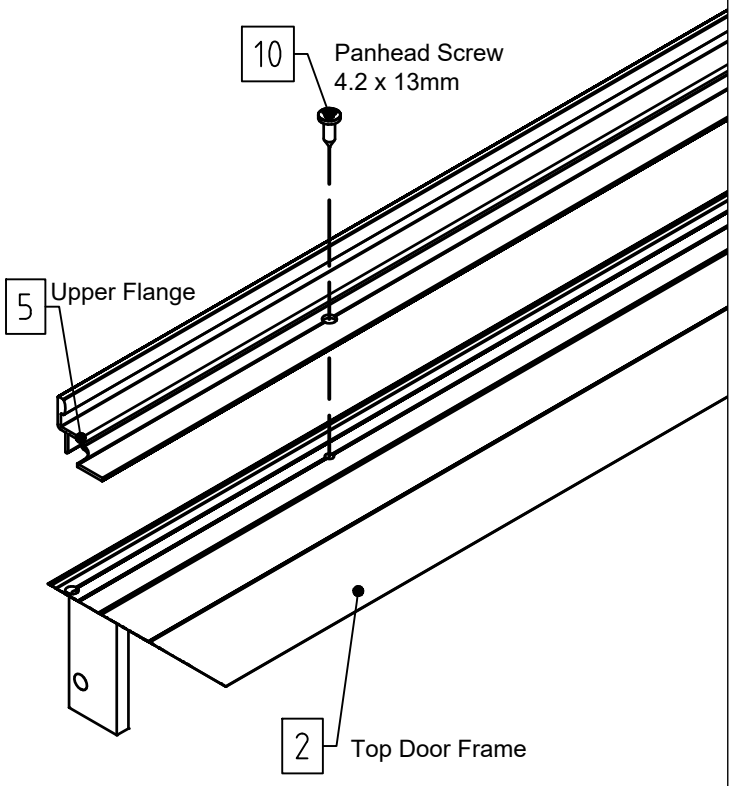


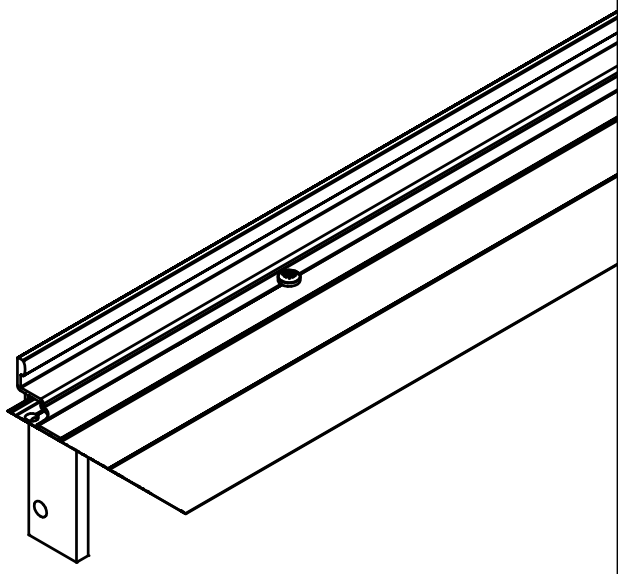
A Exterior View



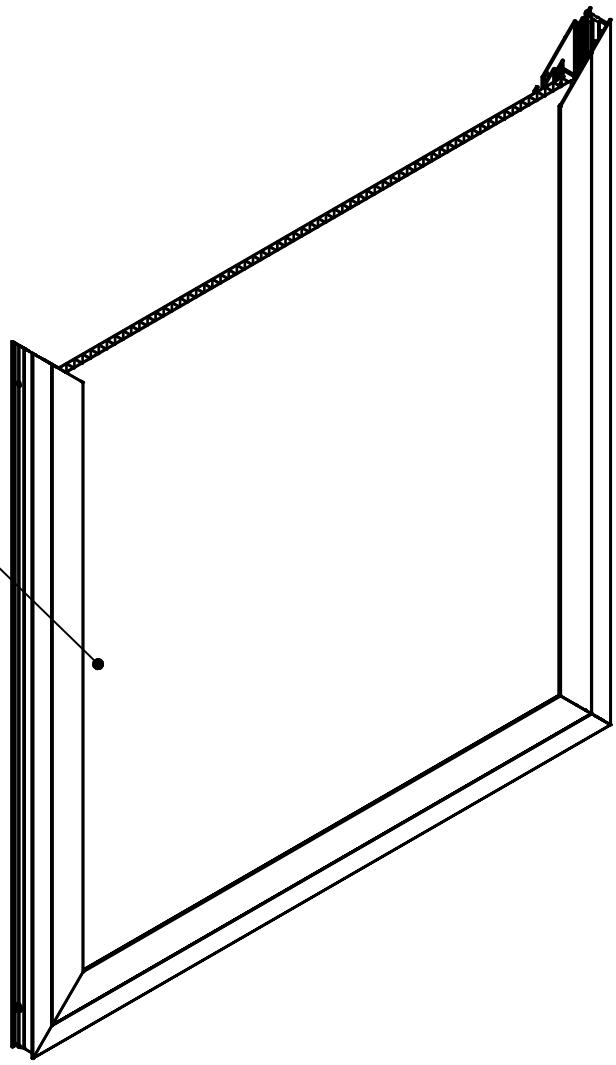
3x

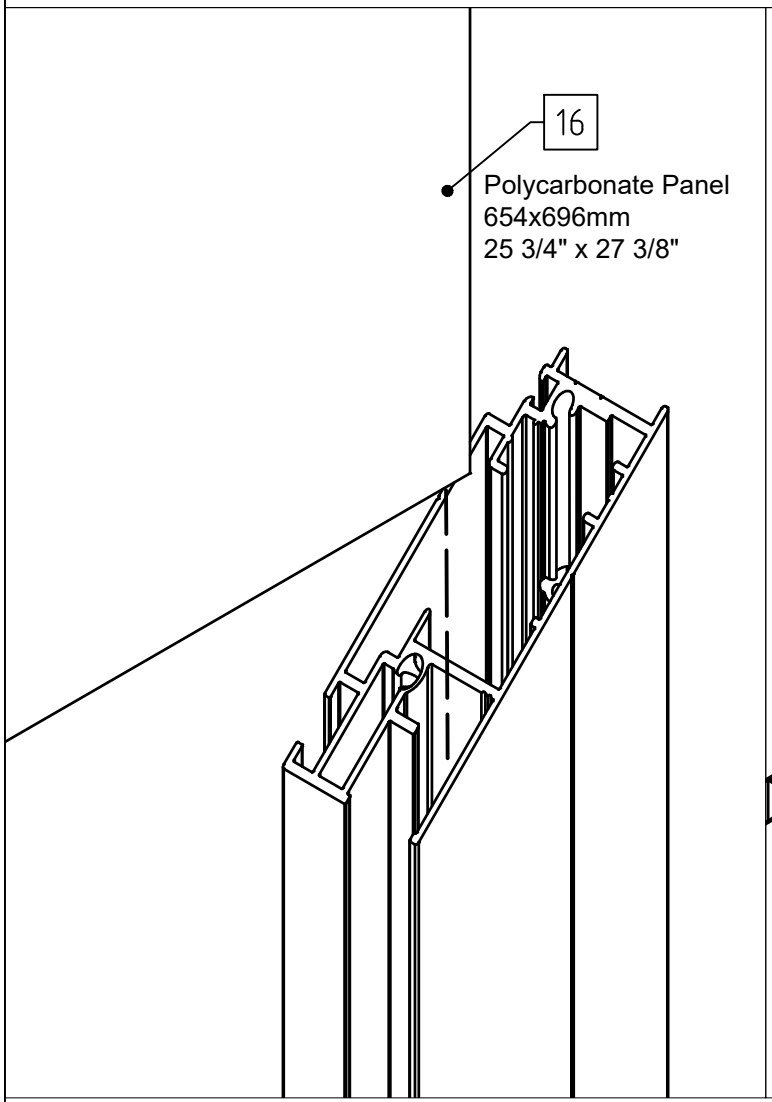
(repeat action with 3 screws through holes)

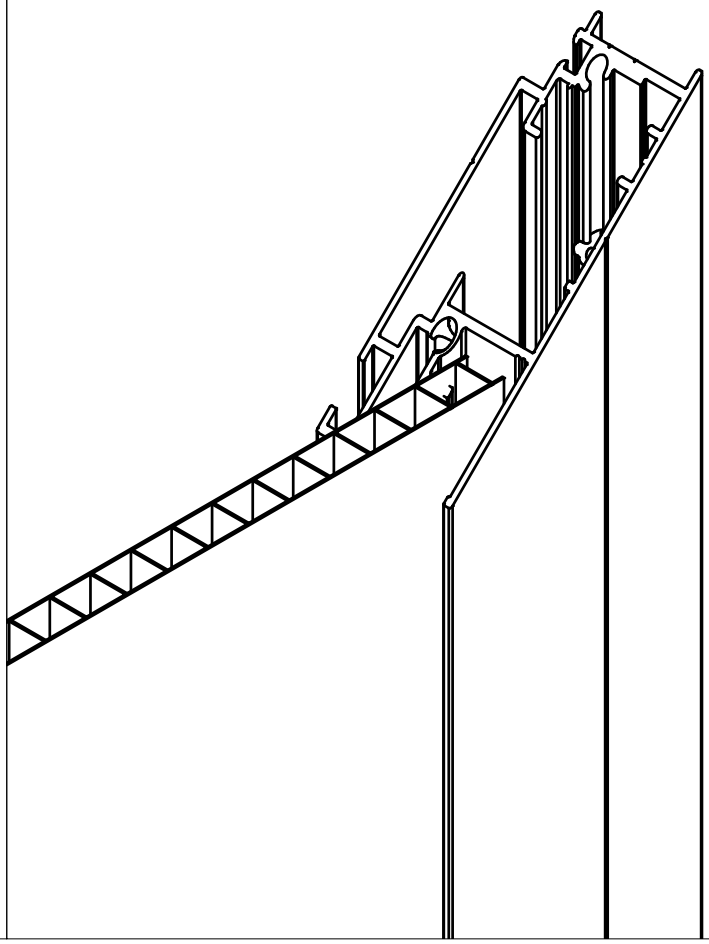




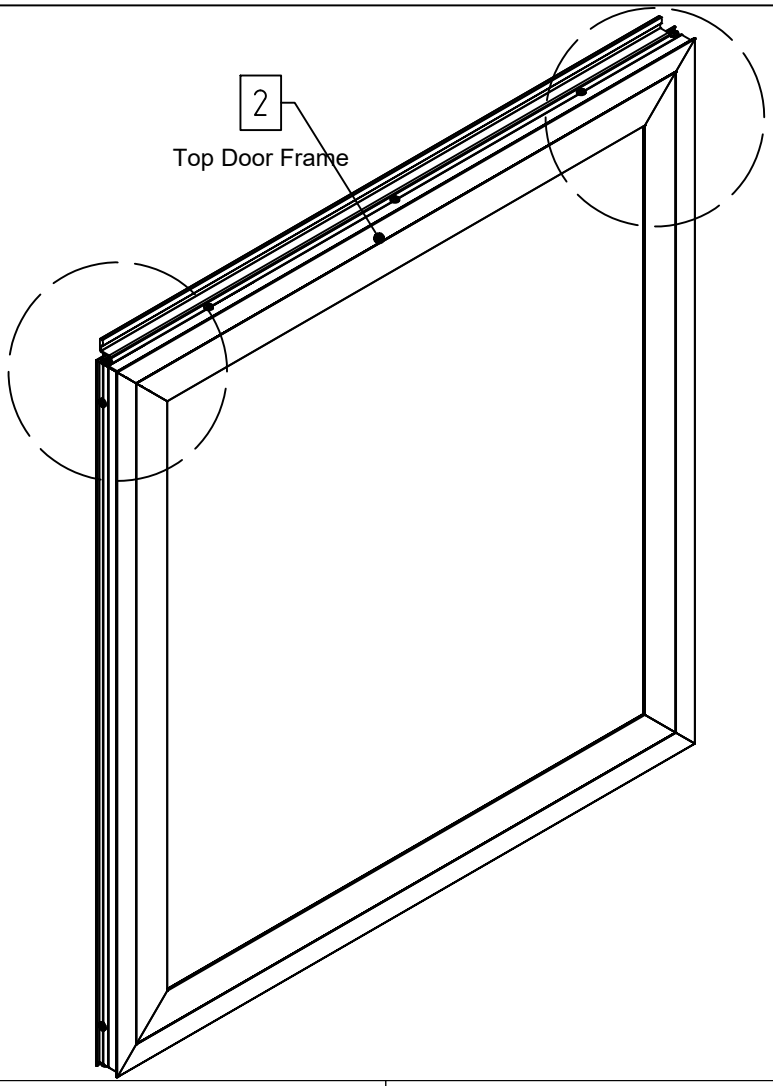
A Exterior View



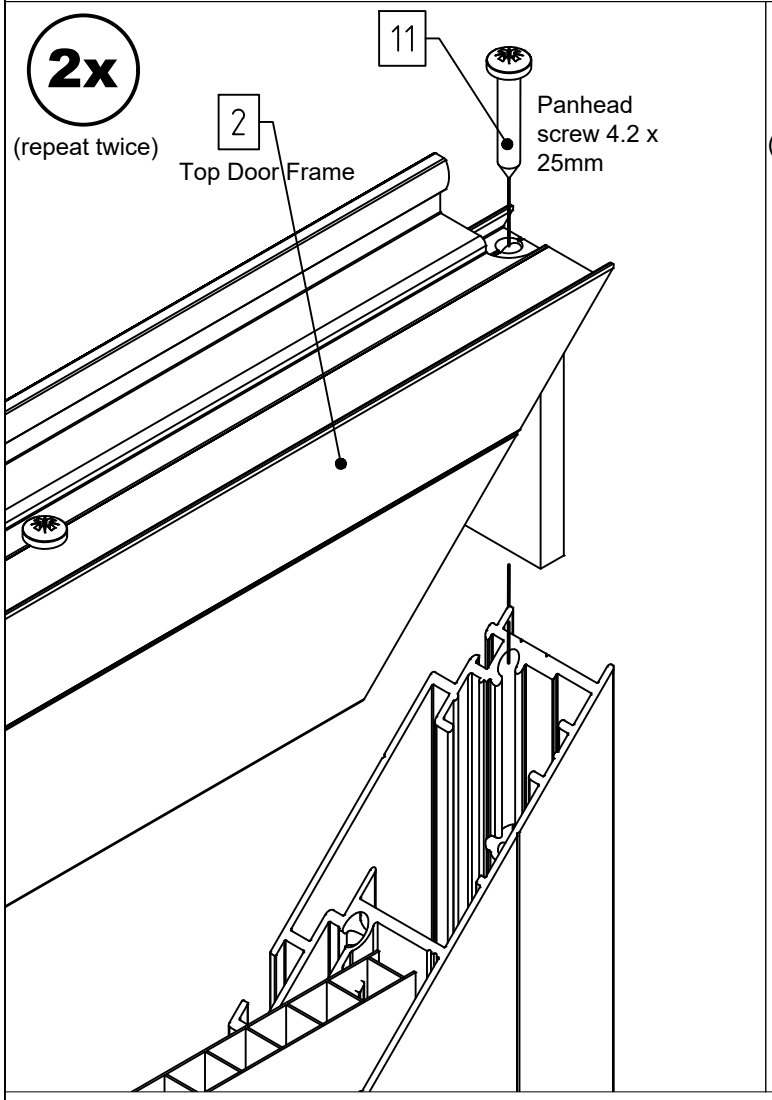




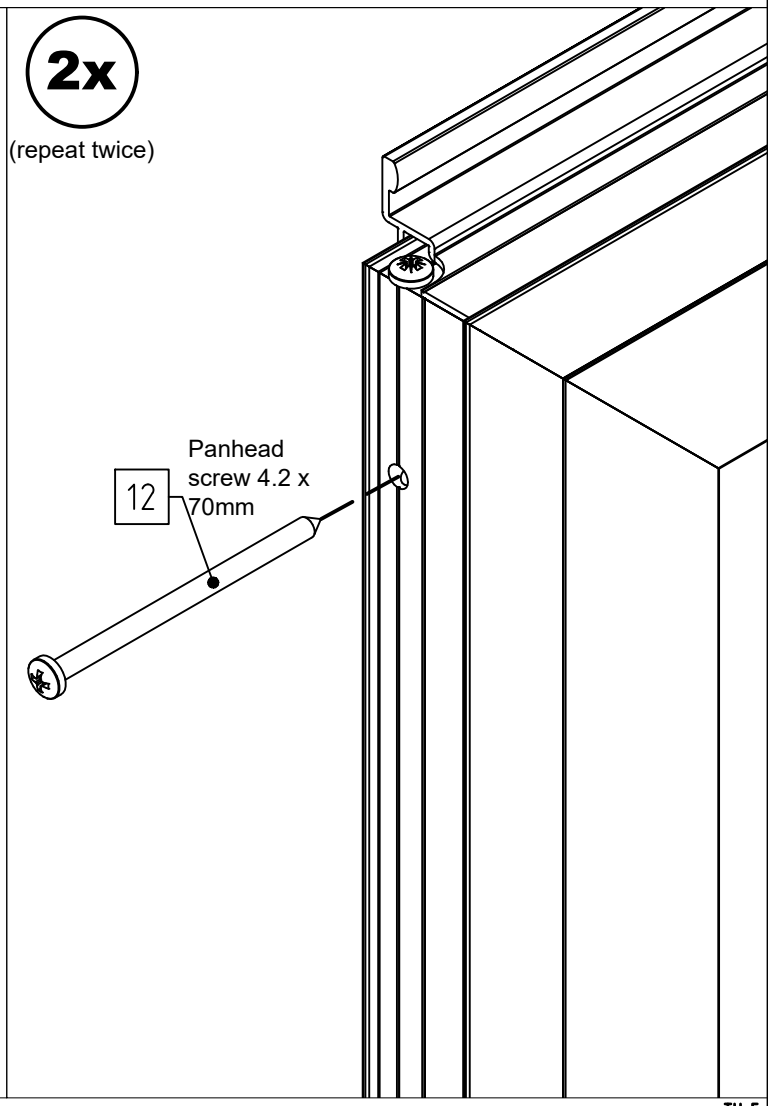
A Exterior View



2x
(repeat twice)



2x
(repeat twice)



TU-F

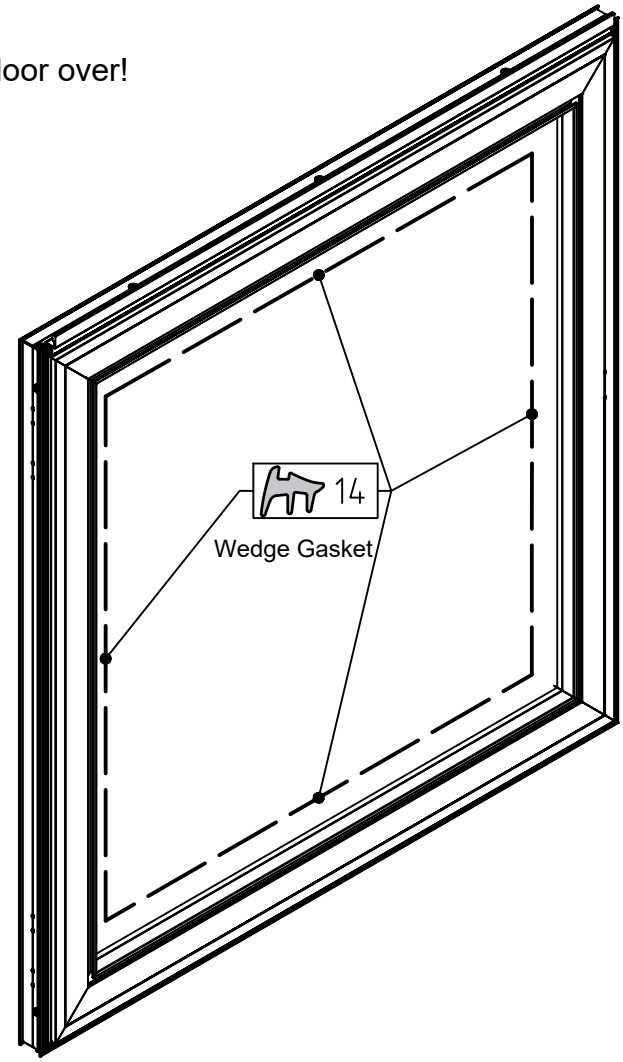
Reverse View! Flip door over!

Interior view

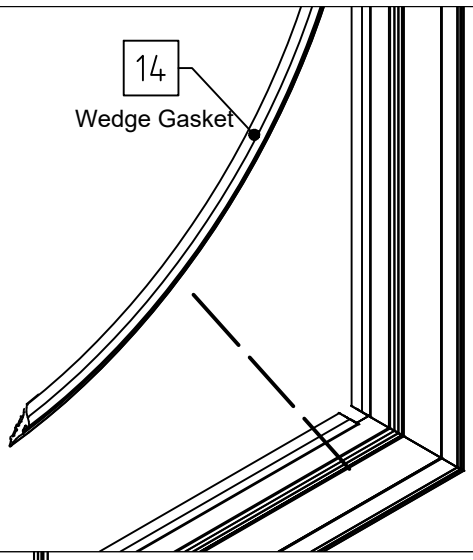
Wedge Gasket

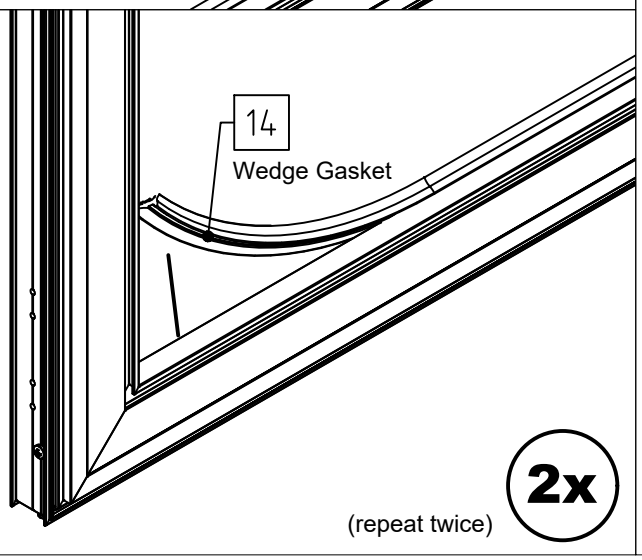
Look at all drawings closely to see orientation of wedge gasket. "Flaps" are against the polycarbonate panel. Cut ends of wedge gasket at an angle for best fit. It is helpful to cut the lengths of gasket slightly longer and compress it together as the gasket can shrink over time.

Wedge Gasket is inserted between polycabonate and framing around all four sides.

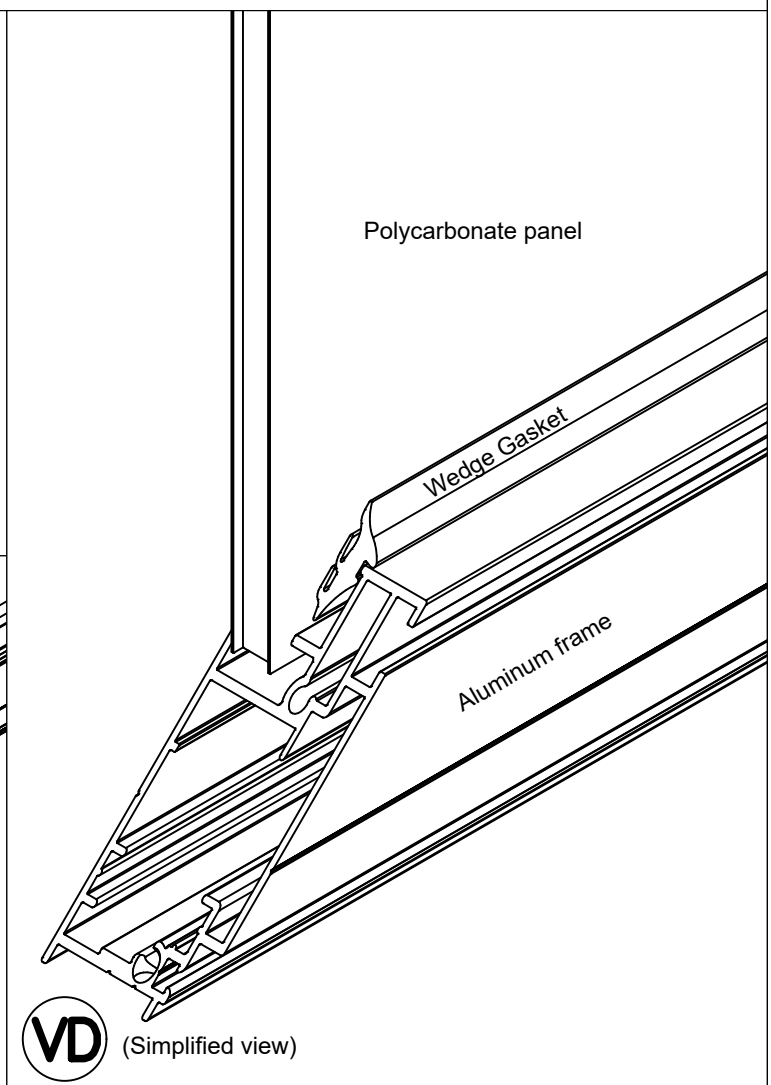


2x
(repeat twice)





2x
(repeat twice)

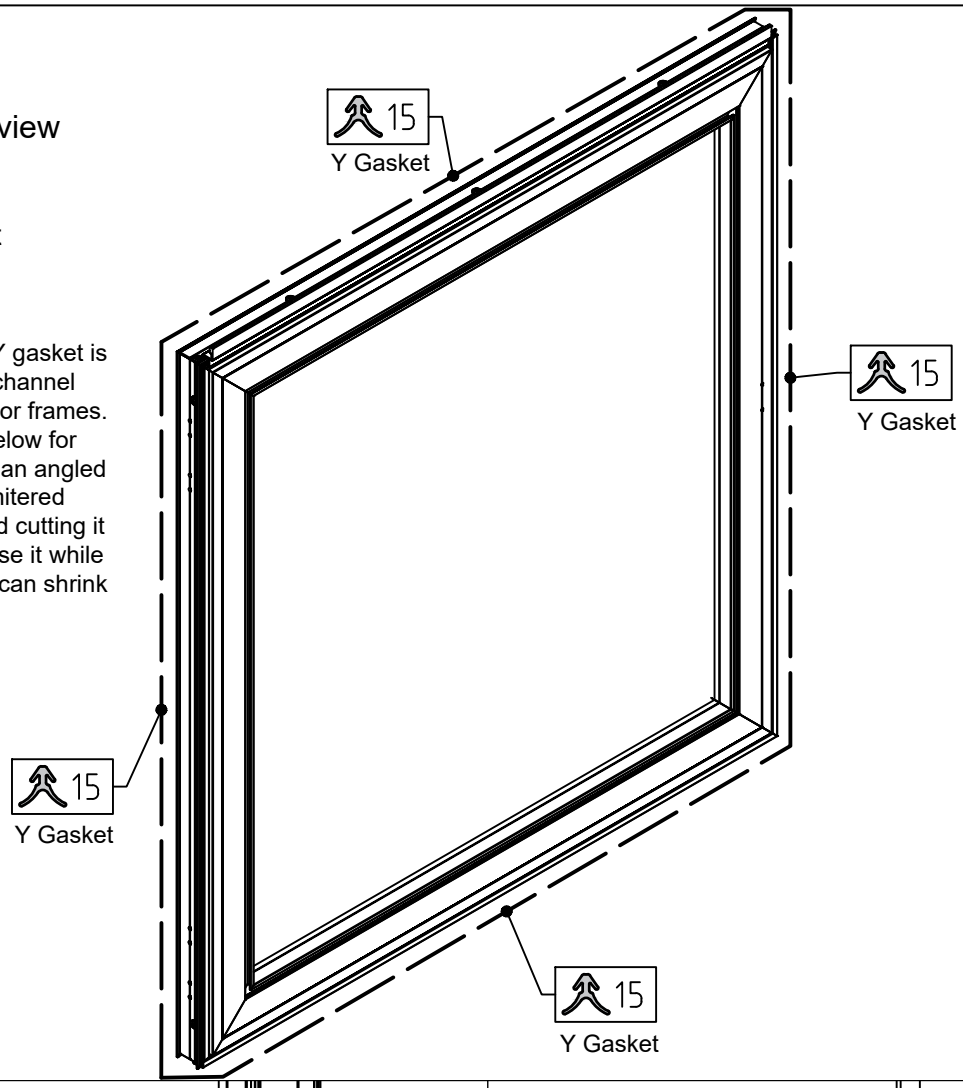


VD (Simplified view)

Interior view

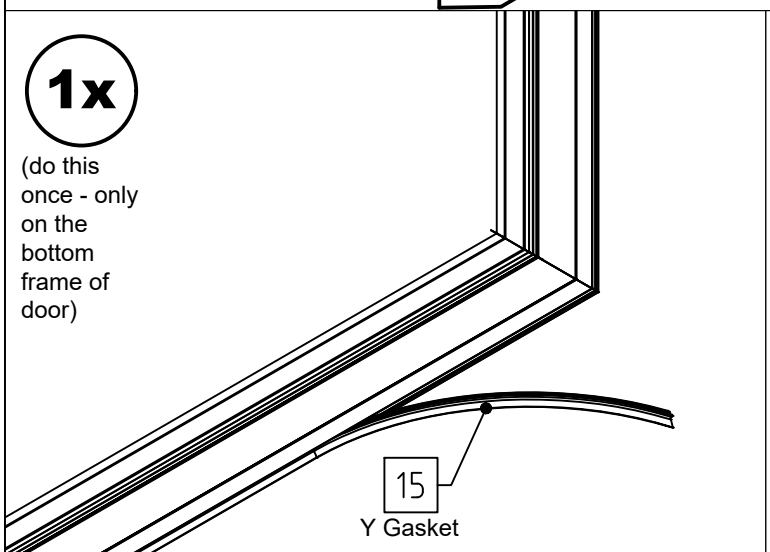
Y Gasket

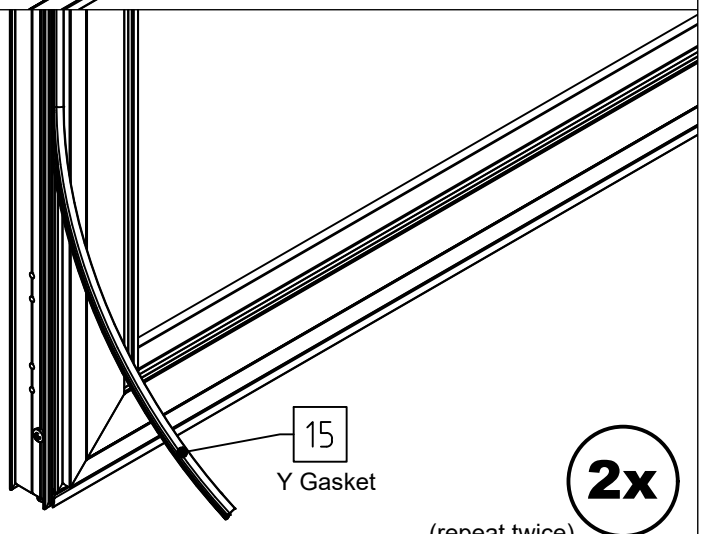
The top "arrow" of the Y gasket is inserted into the small channel near the edge of the door frames. Please see drawings below for placement. Please cut an angled edge a the ends for a mitered corner. We recommend cutting it a little long and condense it while inserting as the gasket can shrink a little over time.



1x

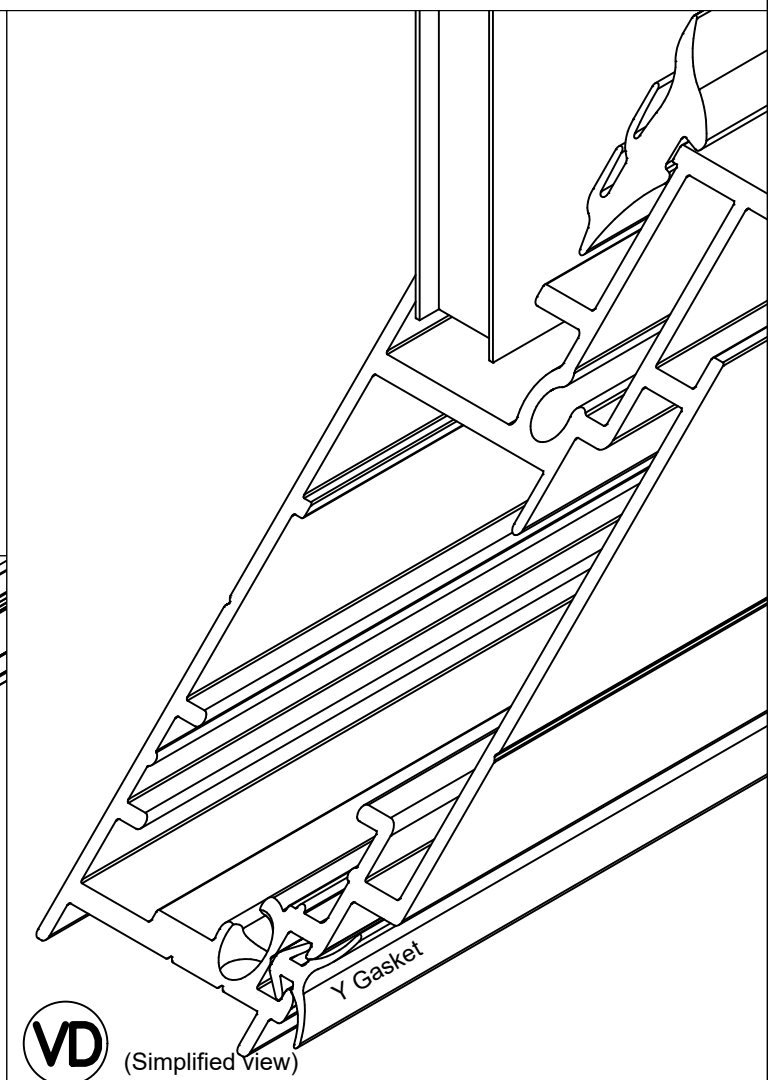
(do this once - only on the bottom frame of door)





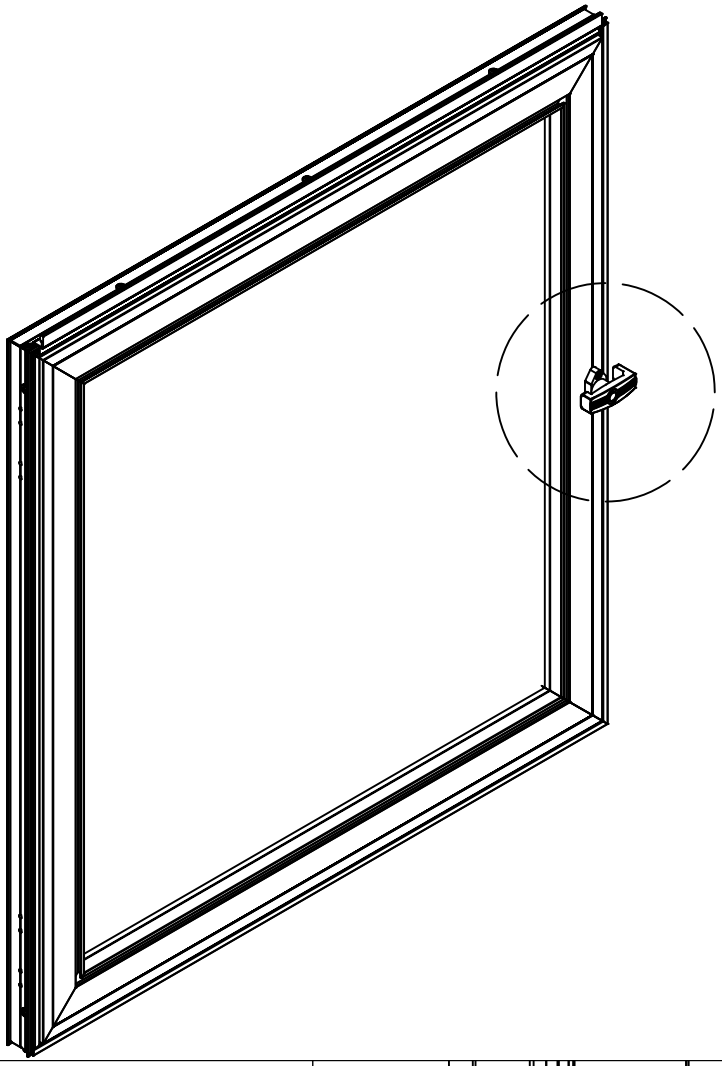
2x

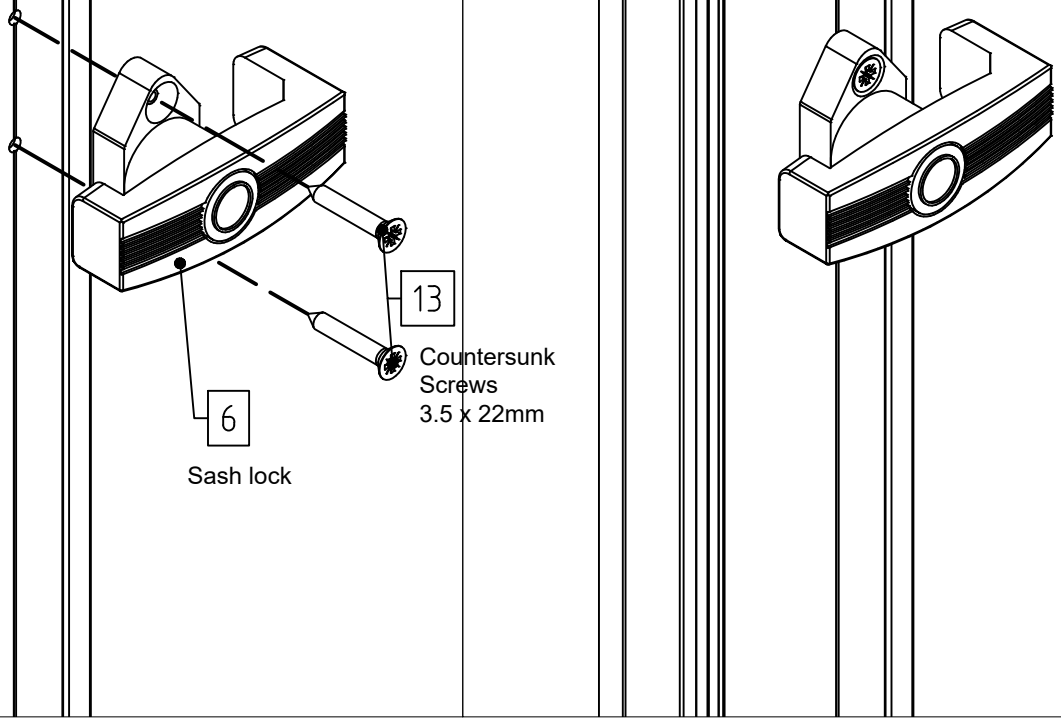
(repeat twice)



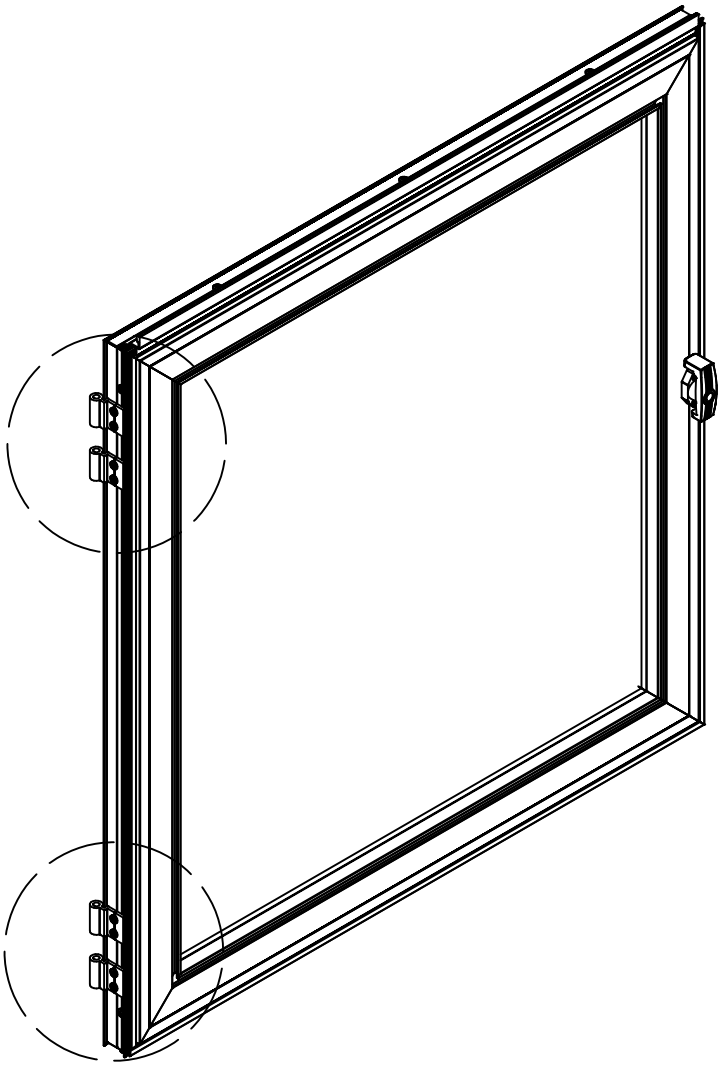
VD (Simplified view)

I Interior View



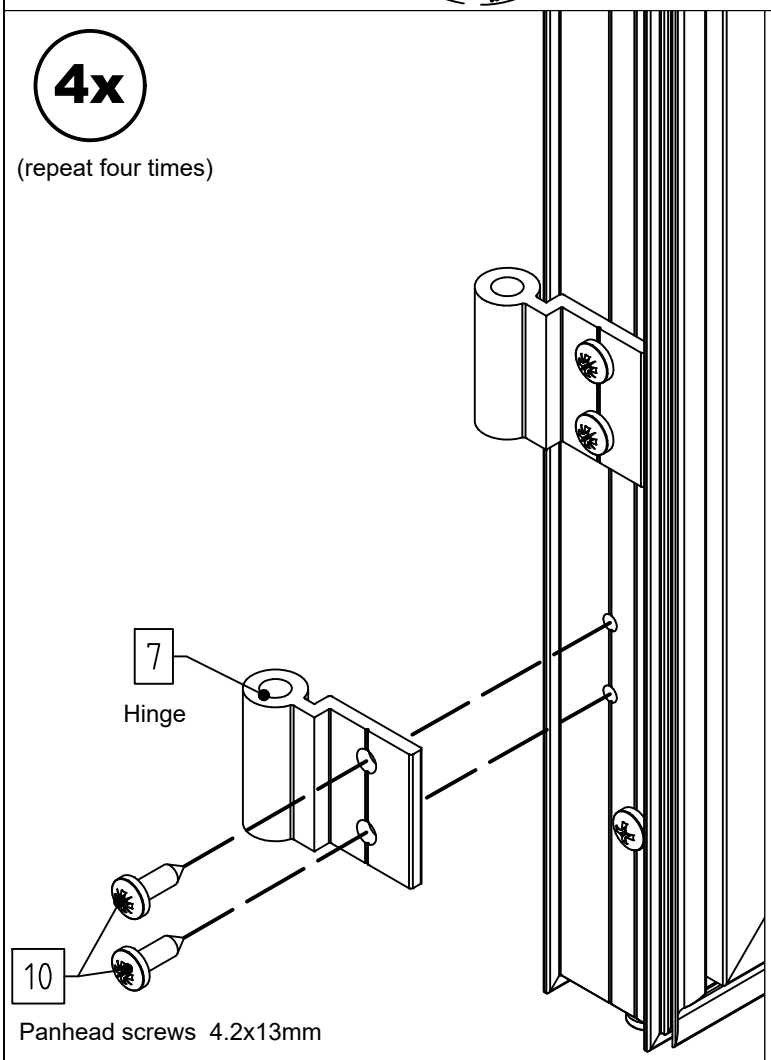


Interior View

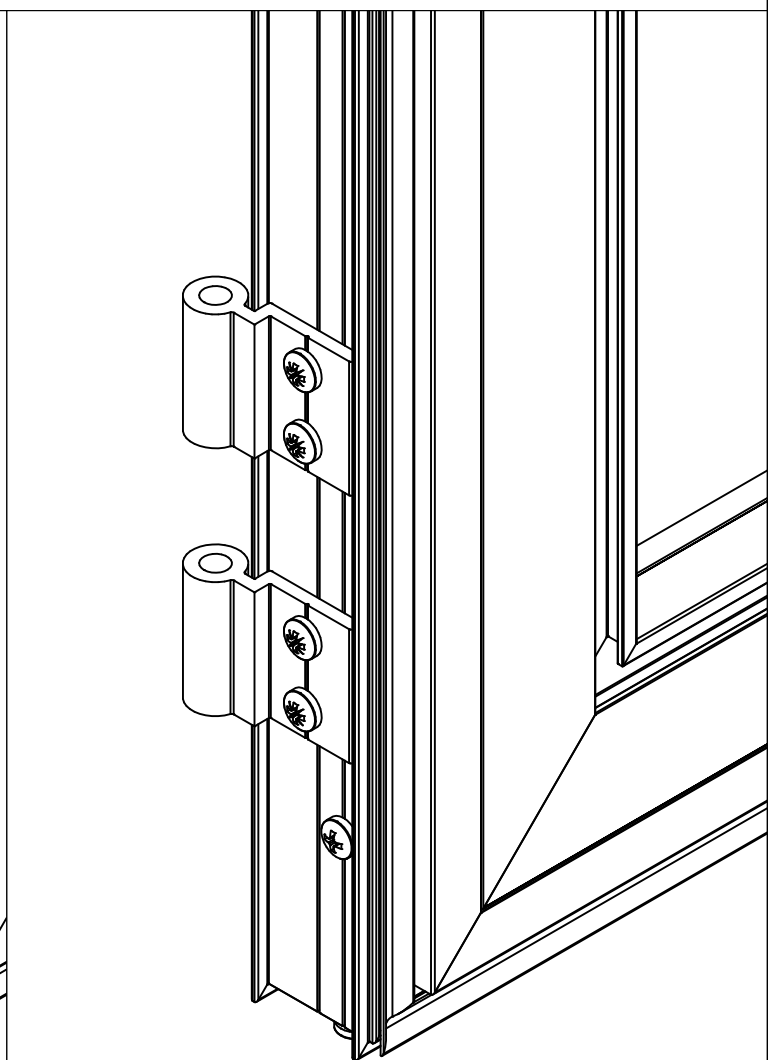


4x

(repeat four times)

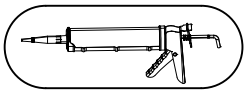


Panhead screws 4.2x13mm

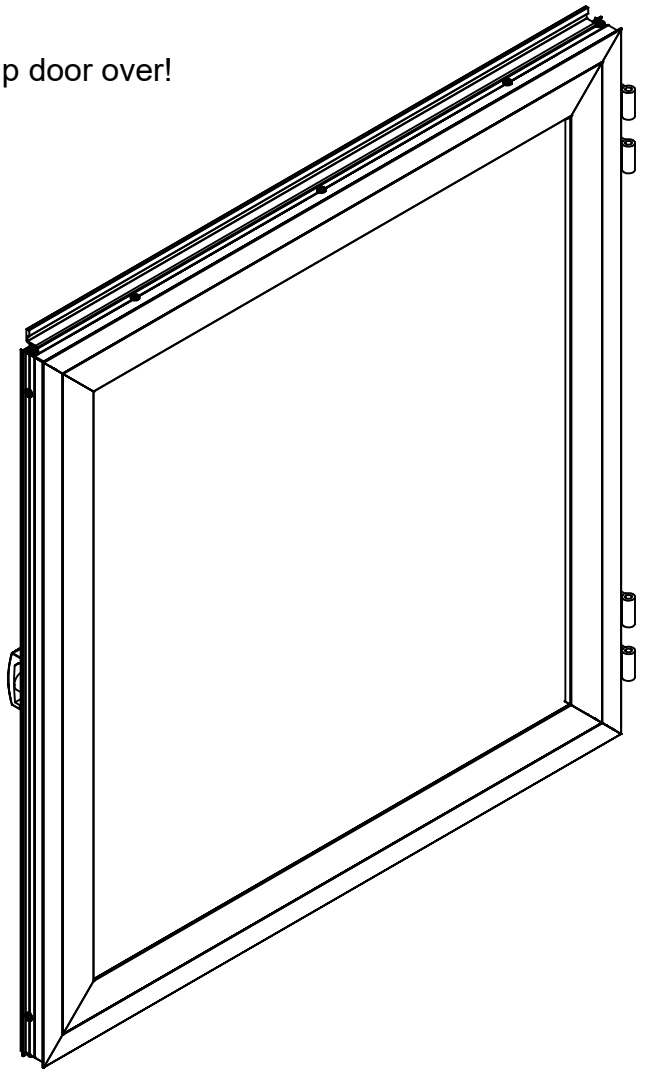


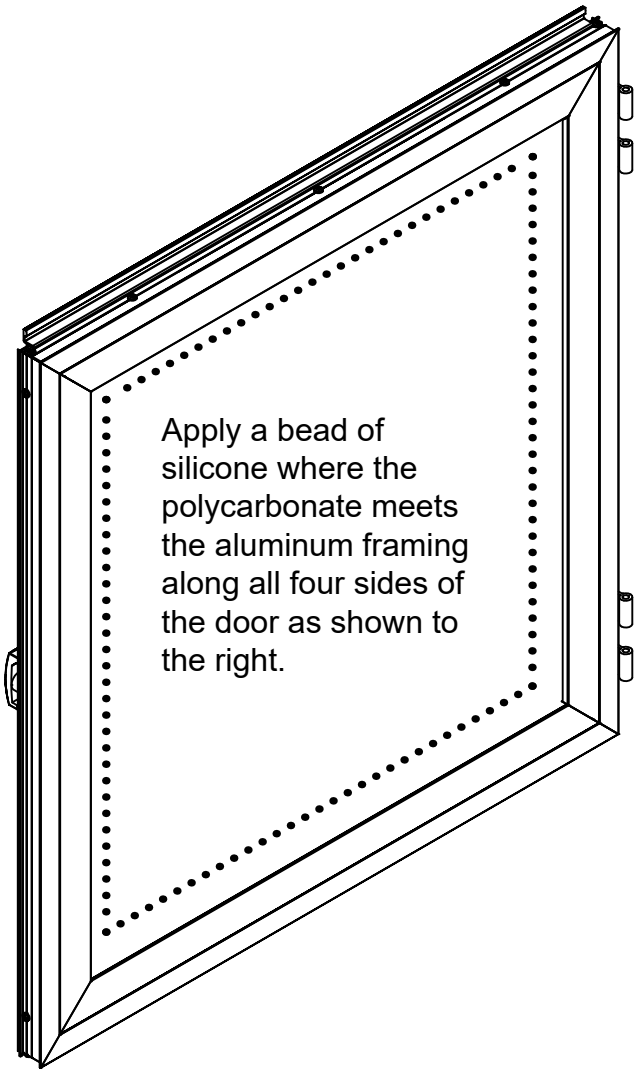
Reverse View! Flip door over!

A Exterior View

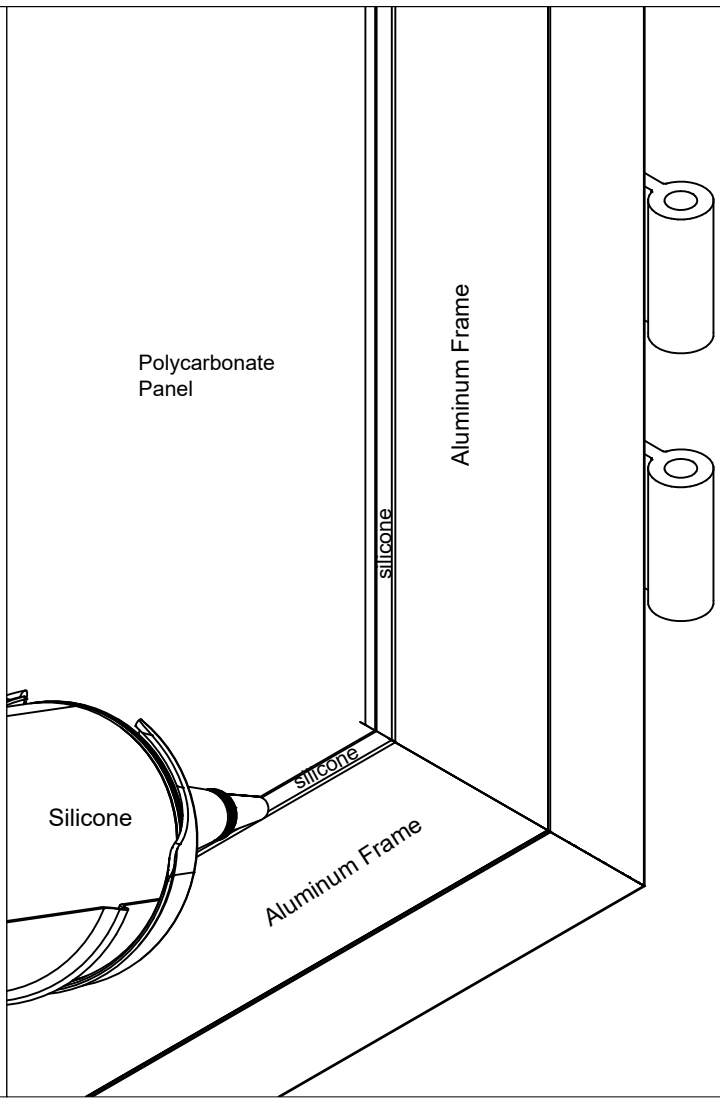


Silicone application is shown with dotted line





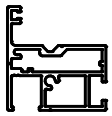
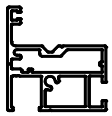
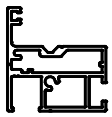
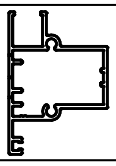
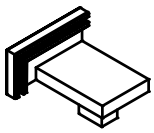
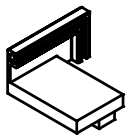
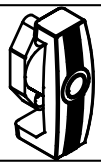
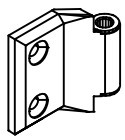
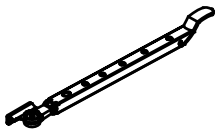
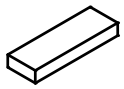
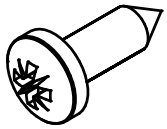
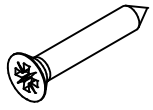
Apply a bead of silicone where the polycarbonate meets the aluminum framing along all four sides of the door as shown to the right.



TU-K

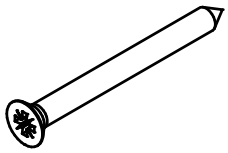
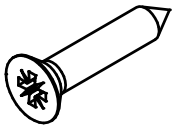
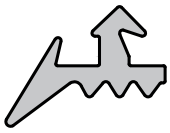
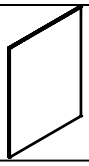
Rear Gable Window Assembly

Packlist and Parts

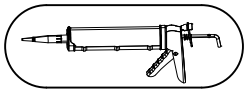
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P080–02–01–00–04–1	Window profile (Top)	1	700 mm
2		P080–06–01–00–04–1 P080–11–01–00–04–1	Window profile (left - exterior view)(with holes for sash lock)	1	RIGA S: 1081 mm RIGA L: 1264 mm
3		P080–07–01–00–04–1 P080–12–01–00–04–1	Window profile (right - exterior view) (with holes for hinges)	1	RIGA S: 1081 mm RIGA L: 1264 mm
4		P081–01–01–00–04–1	Window profile (Bottom)	1	700 mm
5		9999000011	Window Corner Connector (right)	1	
6		9999000009	Window Corner Connector (left)	1	
7		9999000023	Sash lock (black)	1	
8		9999000358	Hinge	2	
9		9999000390	Rear window opener arm	1	
10		9999000672	Glazing block 30 x 10 x 4 mm 1 3/16" x 3/8" x 1/16"	2	
11		9999000144	Panhead screw 4.2 x 13mm (for rear window opener arm)	2	DIN 7981
12		9999000152	Countersunk Screw 3.5 x 22mm (for sashlock)	2	DIN 7982

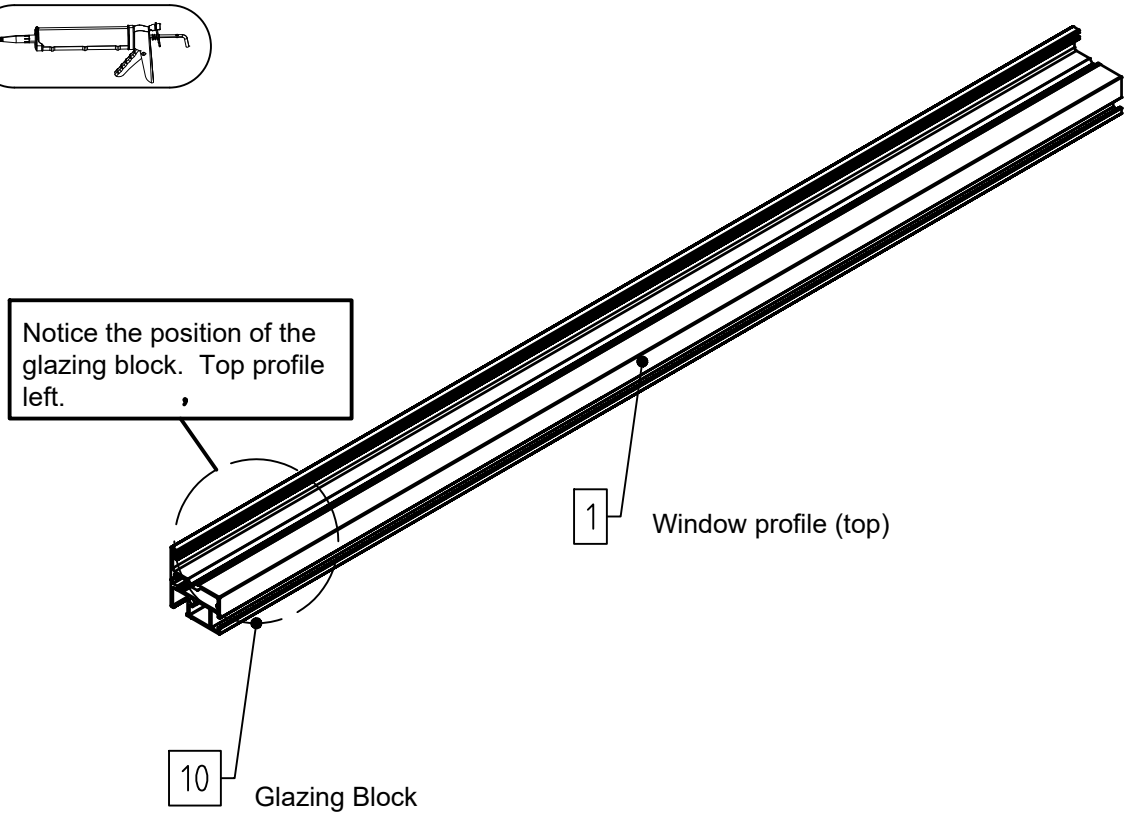
Rear Gable Window Assembly

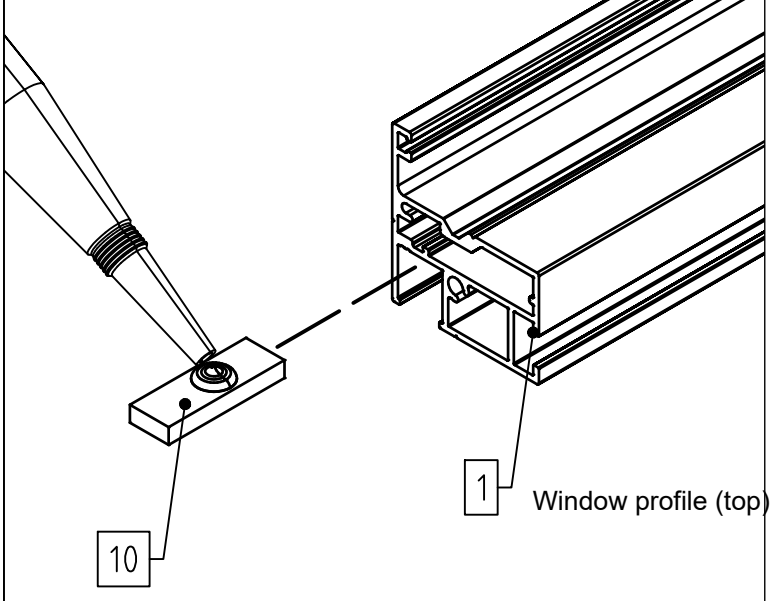
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000160	Countersunk screw 4.2 x 45mm (used to assemble frame)	6	DIN 7982
14		9999000163	Countersunk screw 4.8x 25mm (for hinges)	4	DIN 7982
15		9999000376	Window Seal Gasket 2 mm	4,5 lfdm 14.75 ft	
16			Rear Window Poly panel	1	RIGA S: 724x1031mm 28 1/2" x 40 9/16" RIGA L: 724x1215mm 28 1/2" x 47 13/16"
17					
18					
19					
20					
21					
22					
23					
24					

Interior View

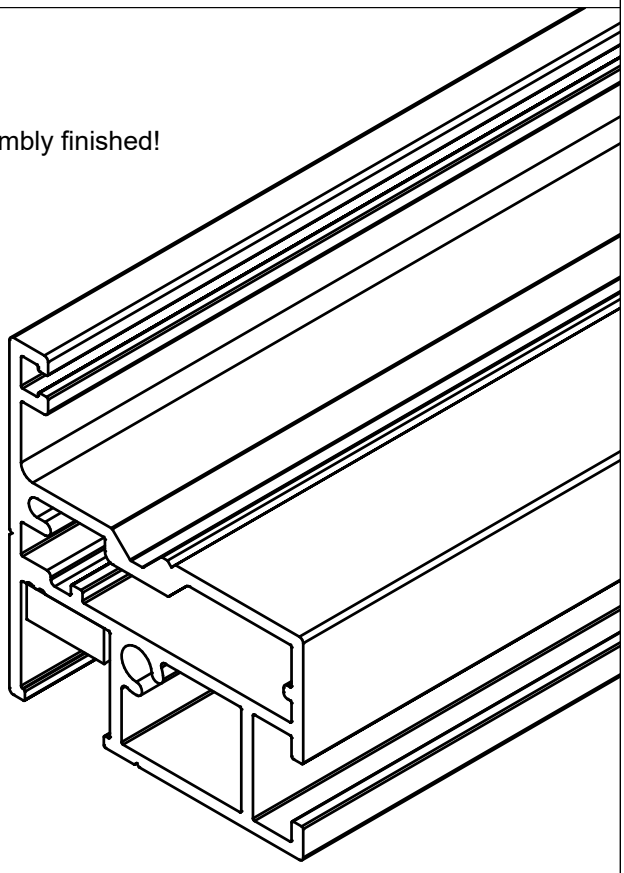






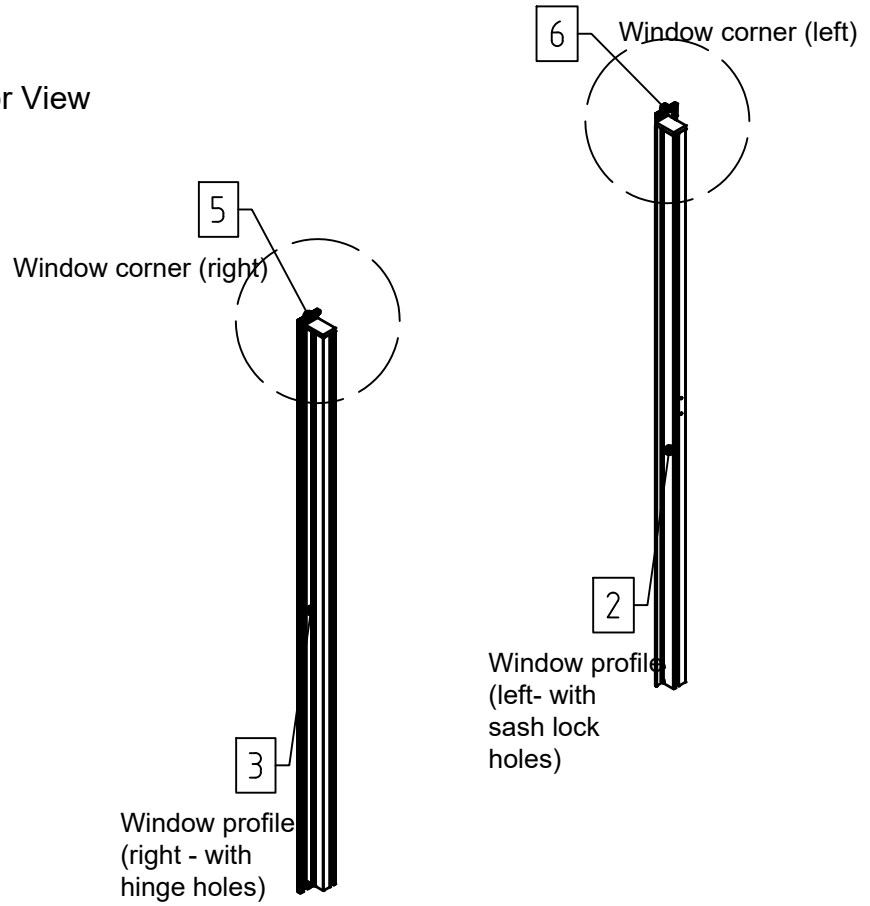
Glazing block goes in the top door profile on the left side to help prevent door sagging. Use a dab of silicone to keep in place.

Assembly finished!

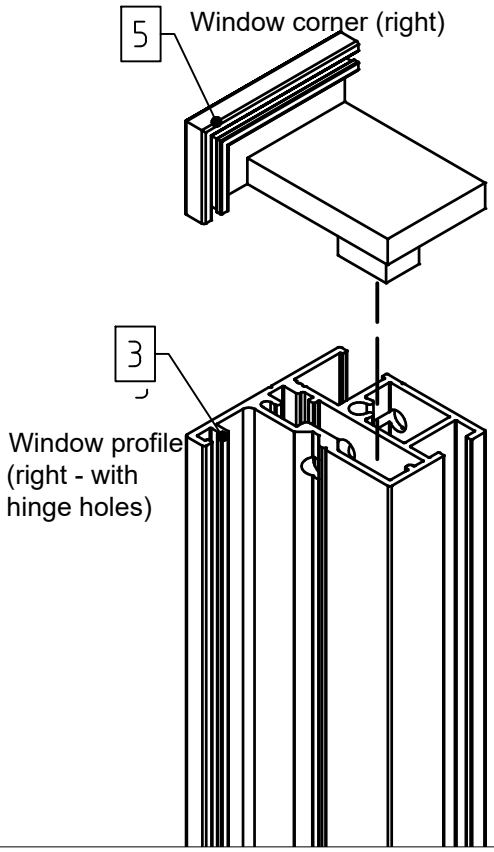


VD

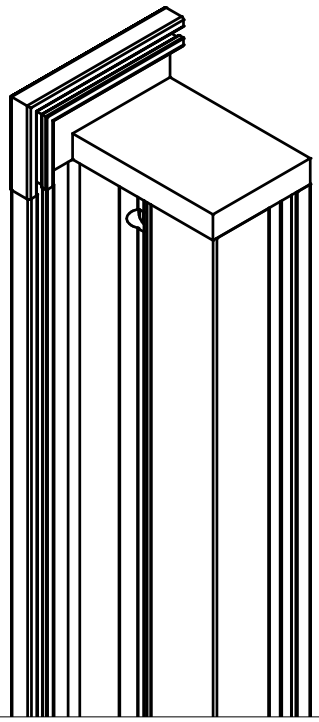
I Interior View



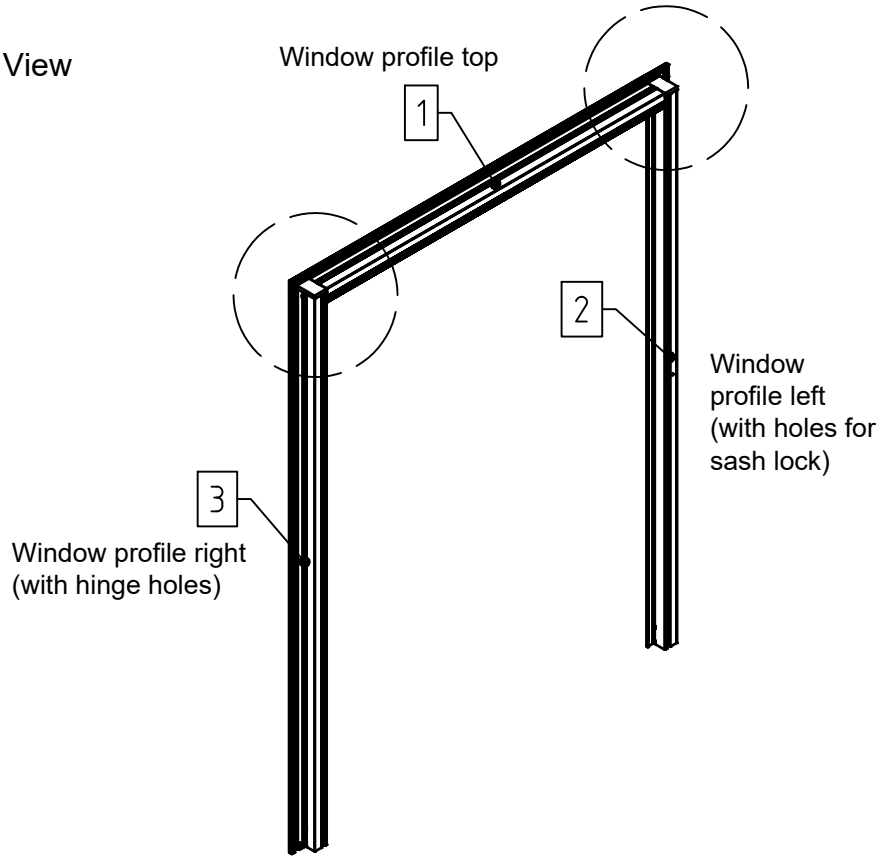
2x (repeat on both left and right profiles)

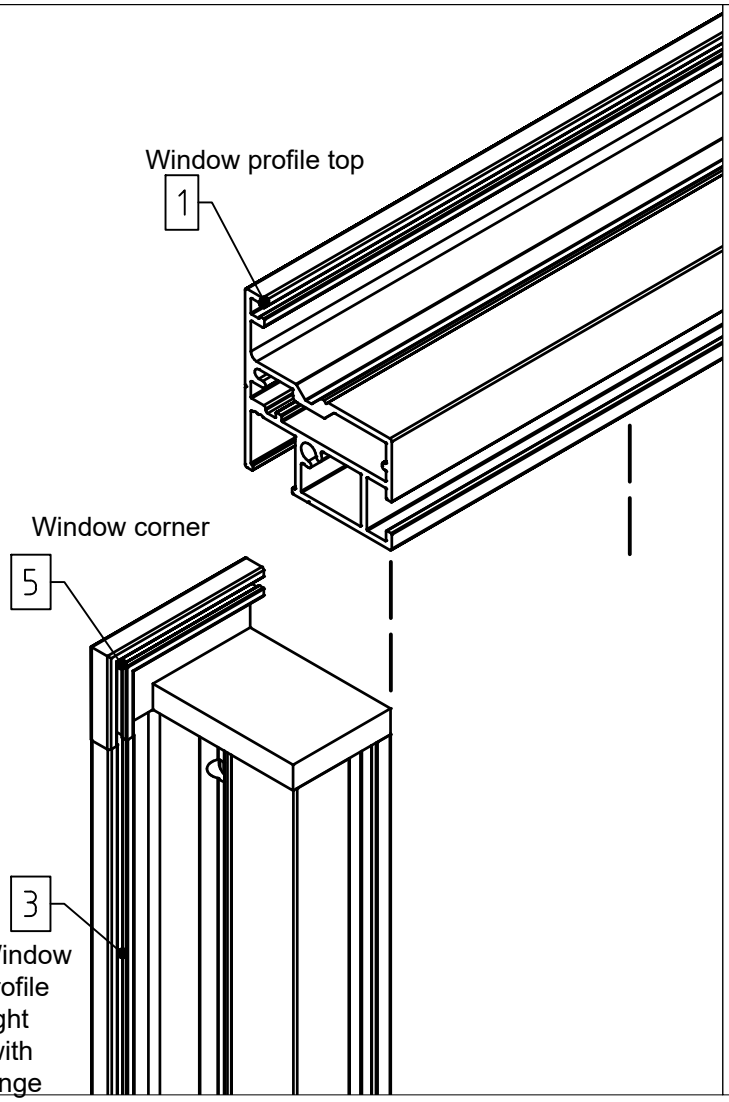


Assembly finished!

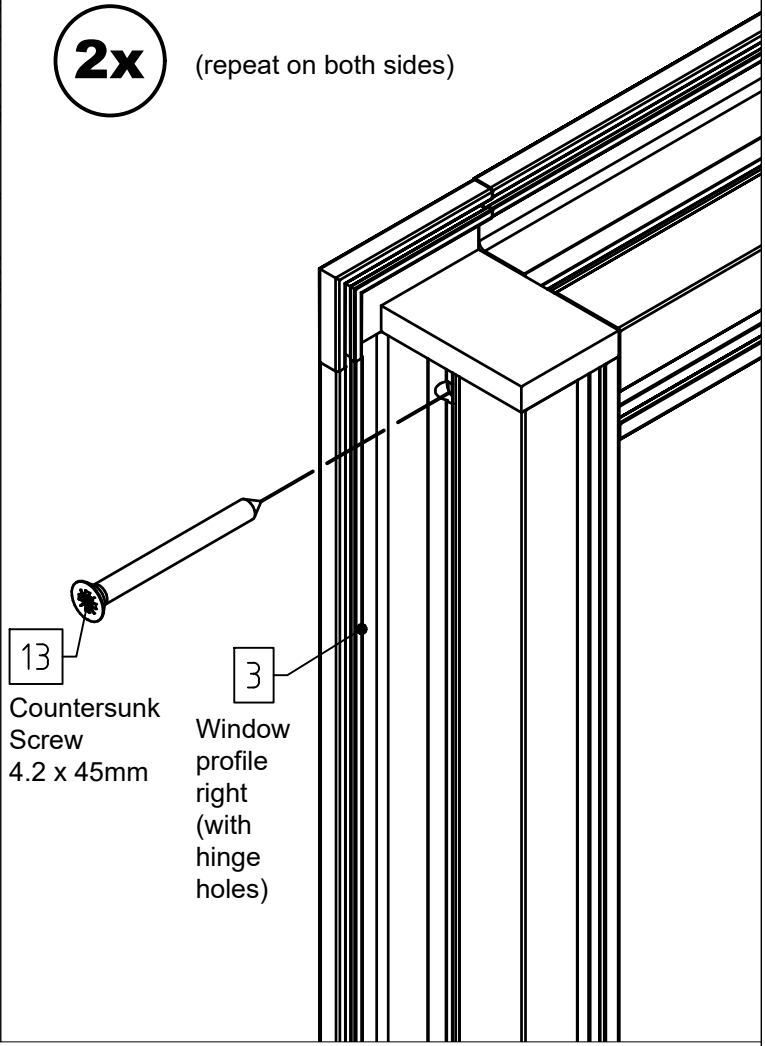


Interior View



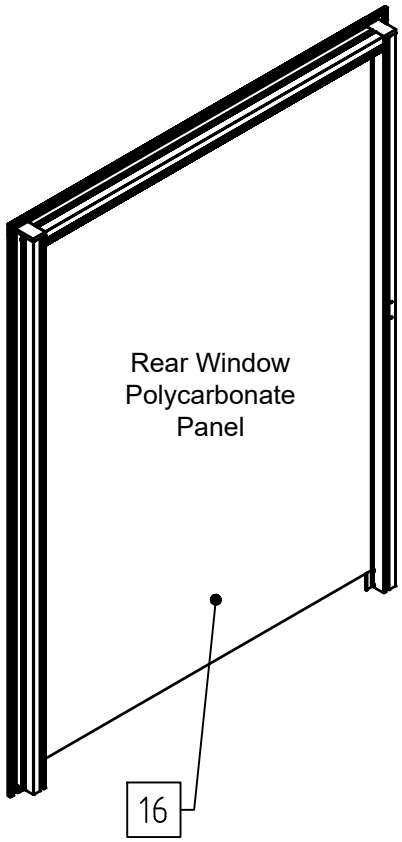


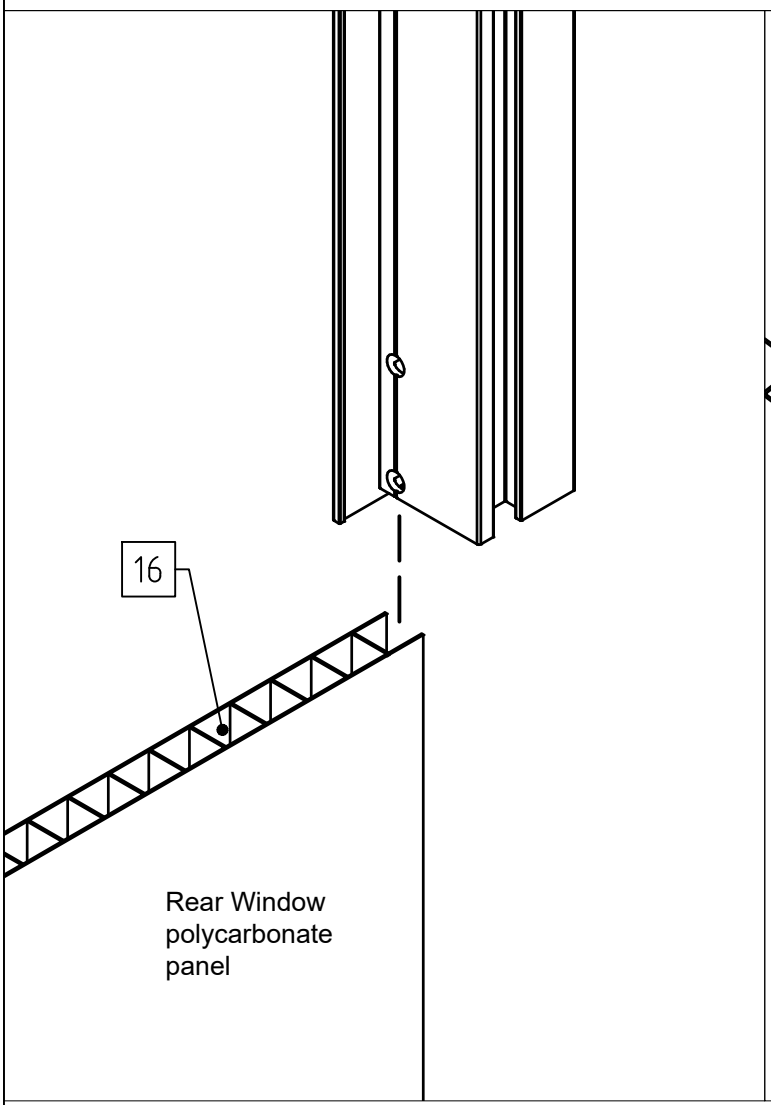
2x (repeat on both sides)

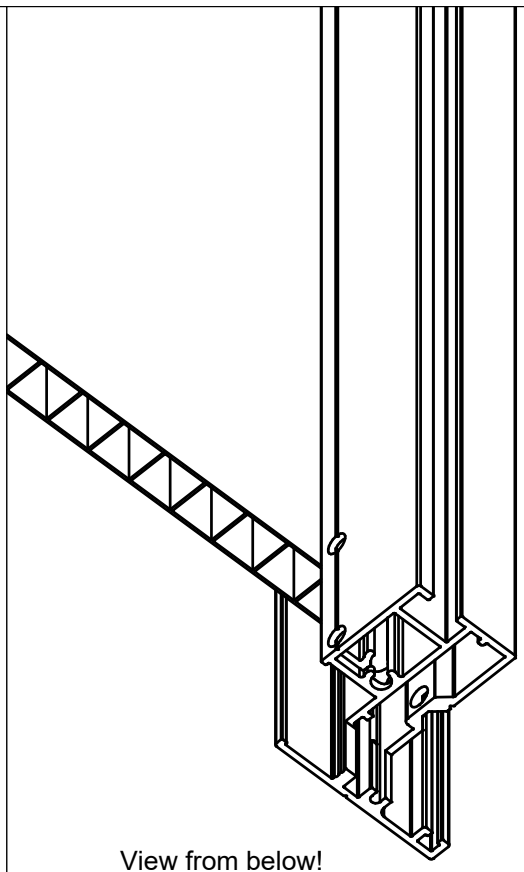


RF-C

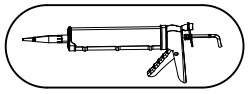
Interior View





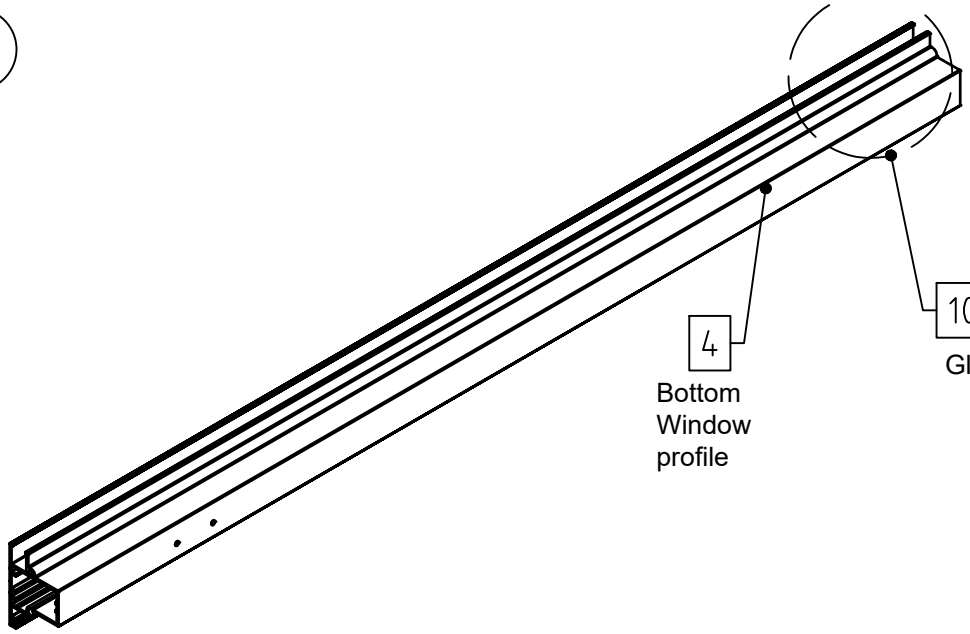


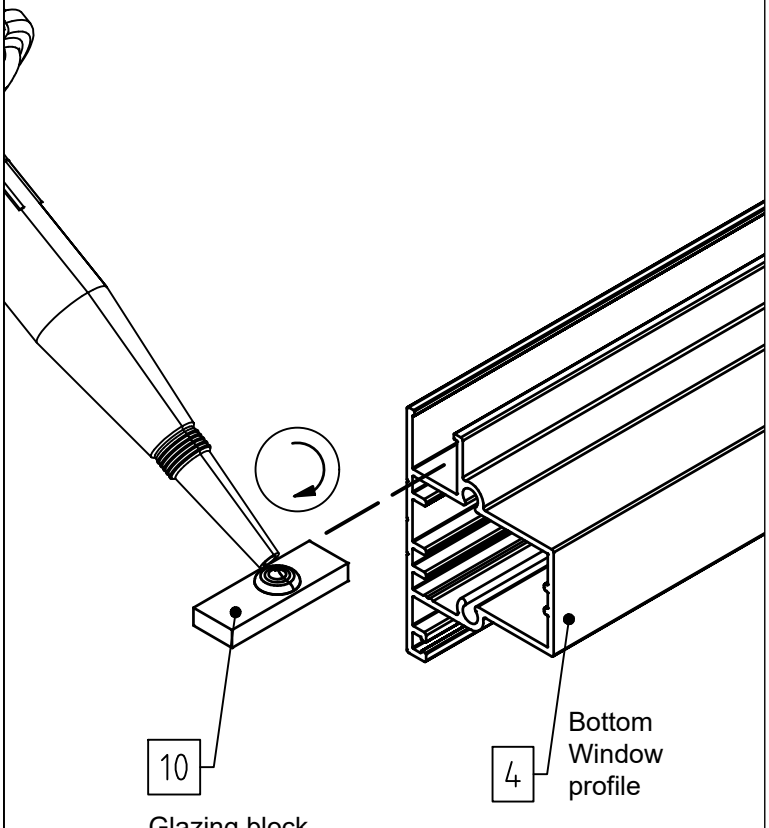
Interior View



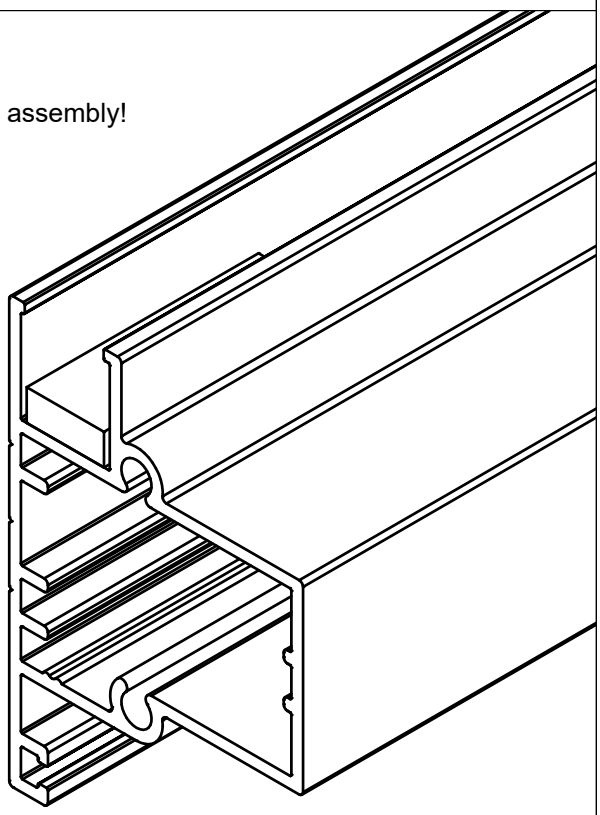
(Silicone)

Notice postion of glazing block in bottom profile on right side.



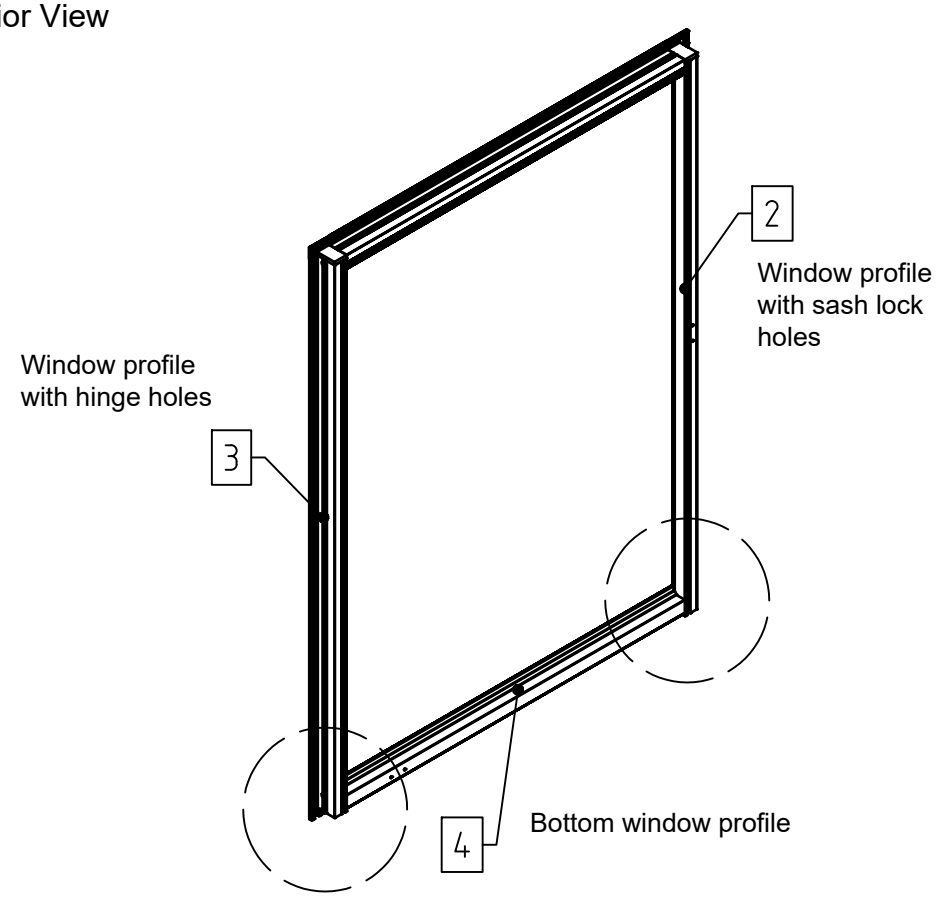


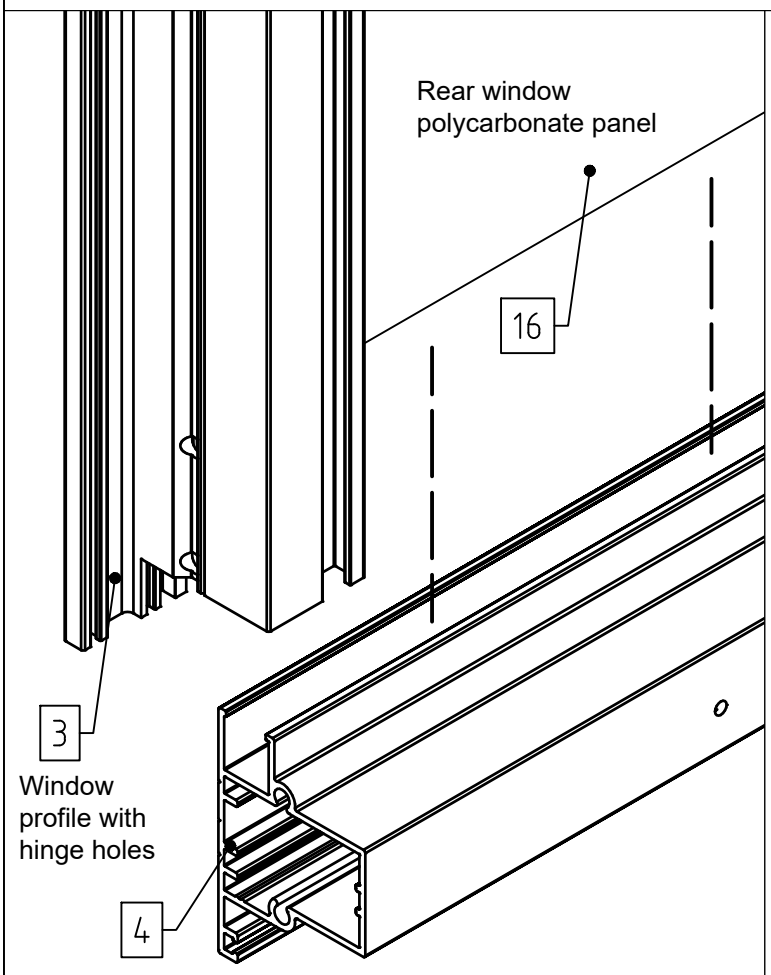
Finished assembly!



VD Simplified drawing

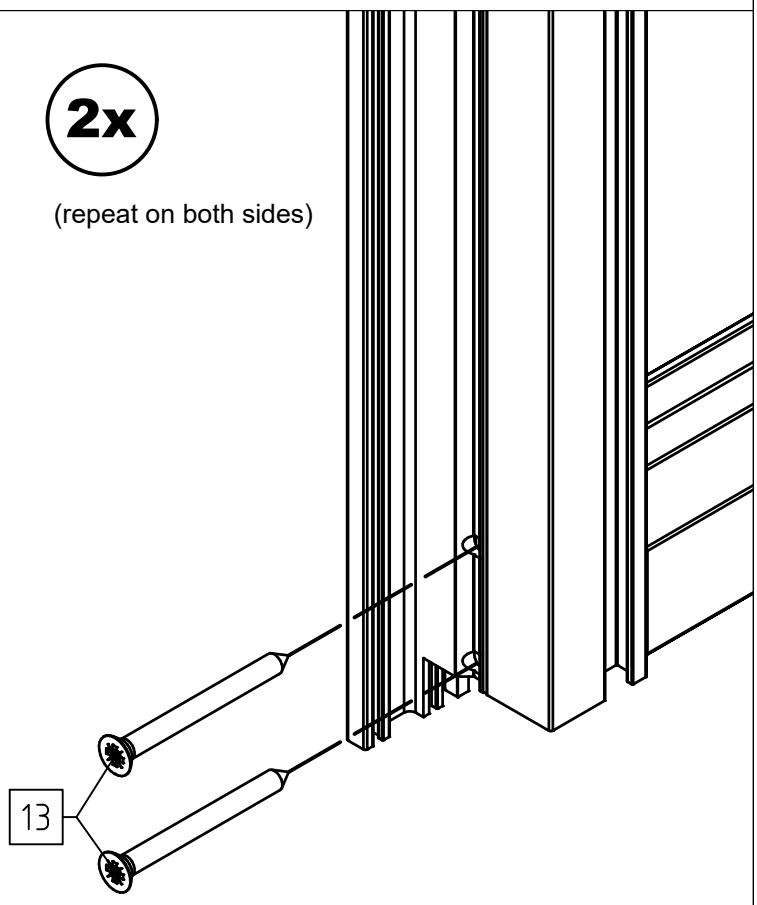
Interior View





2x

(repeat on both sides)

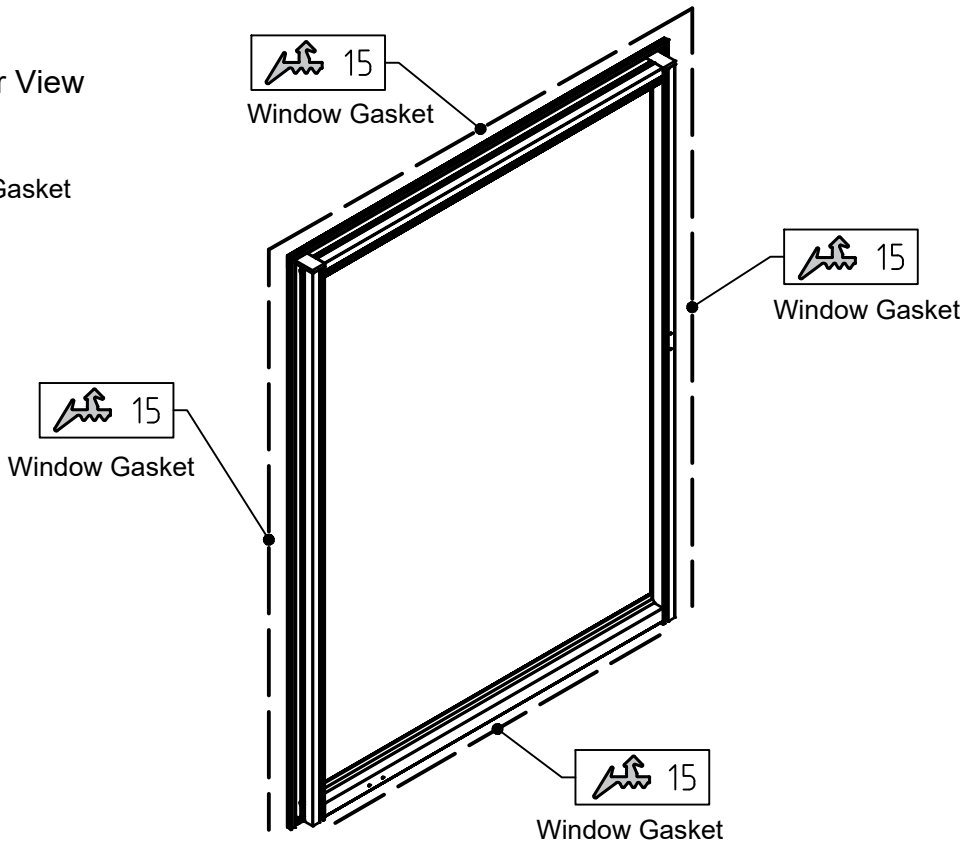


Countersunk screws 4.2 x 45mm

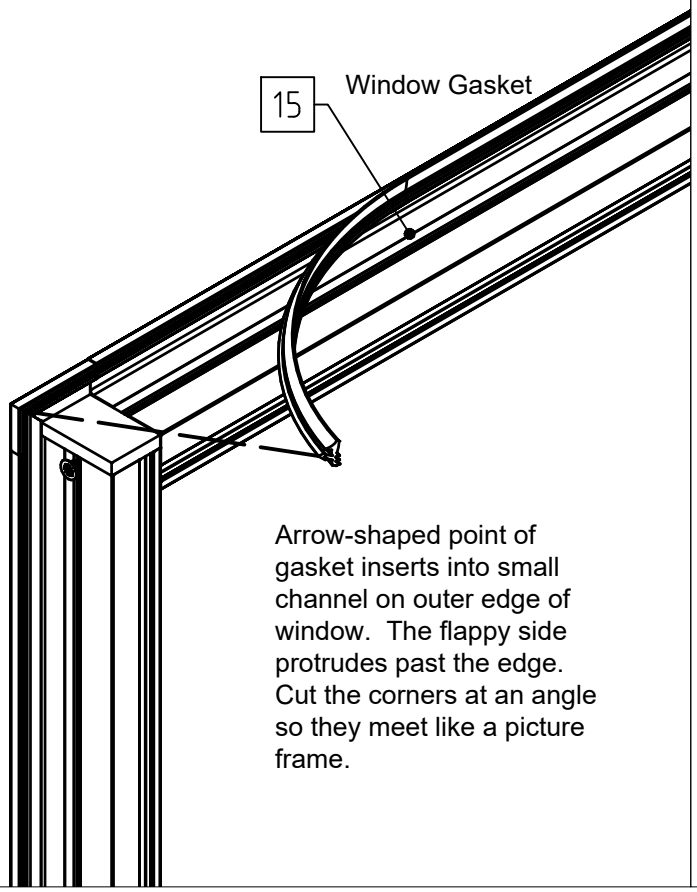
Note: screws go through holes and into rounded channels on bottom window profile

Interior View

Window Gasket

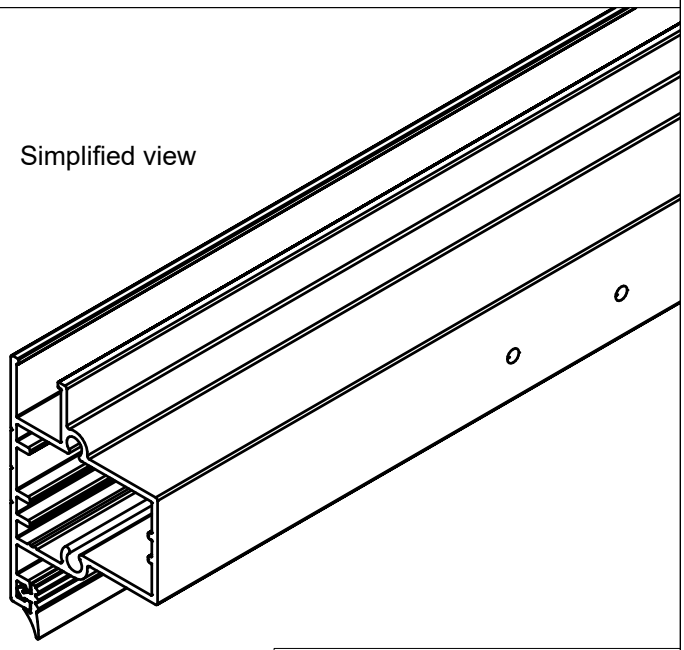


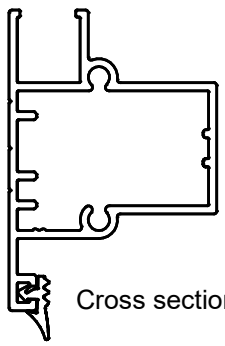
4x (Repeat on all four sides of rear window)



Arrow-shaped point of gasket inserts into small channel on outer edge of window. The flappy side protrudes past the edge. Cut the corners at an angle so they meet like a picture frame.

Simplified view

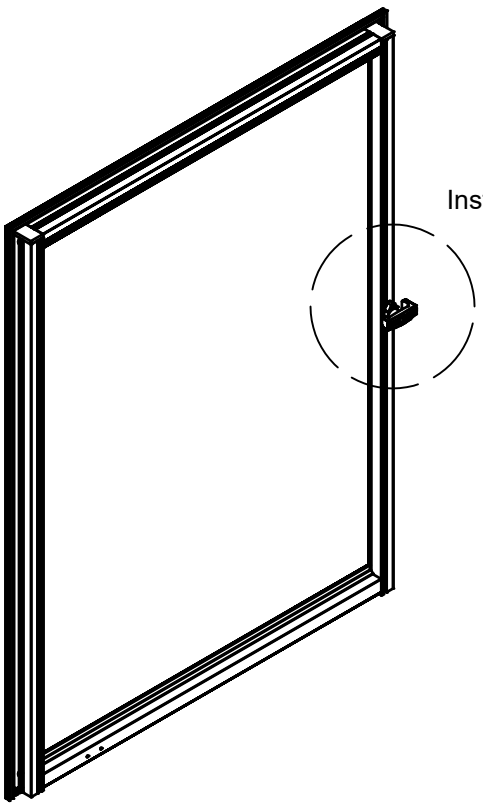


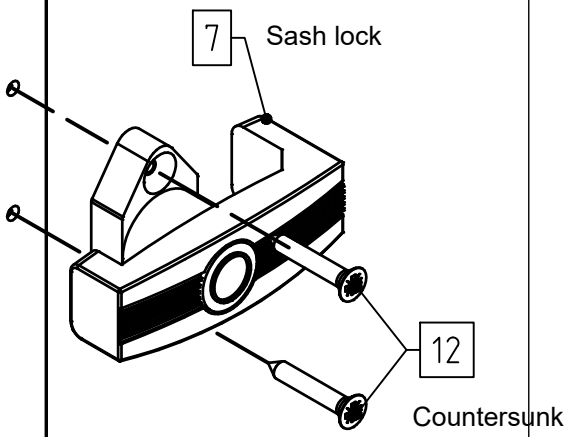


Cross section

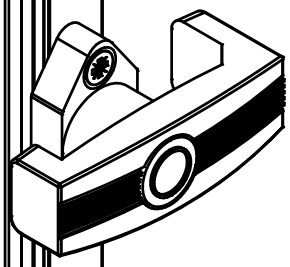
VD

Interior View



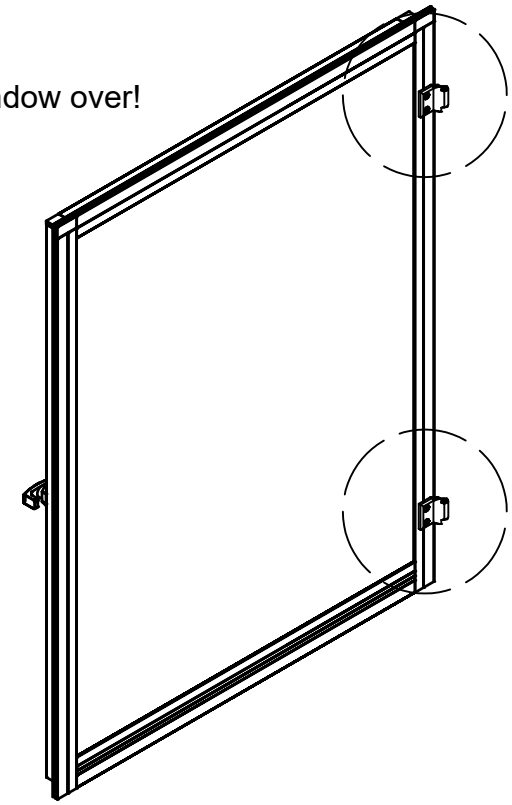


Finished assembly!

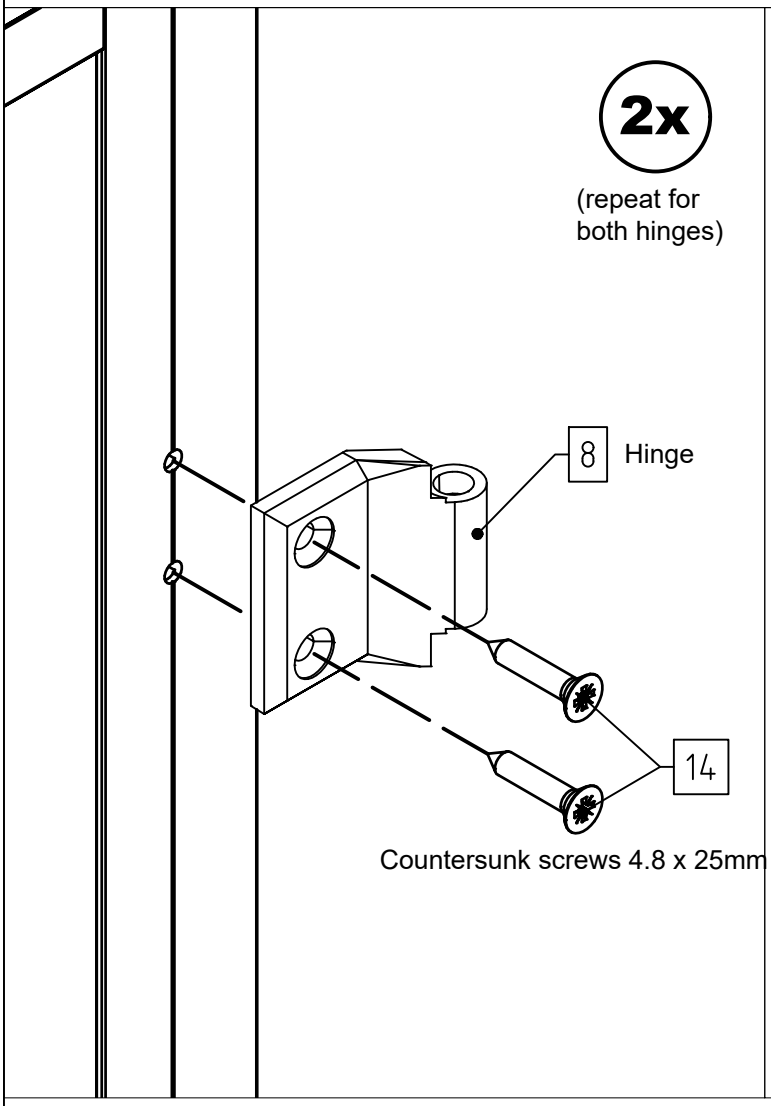


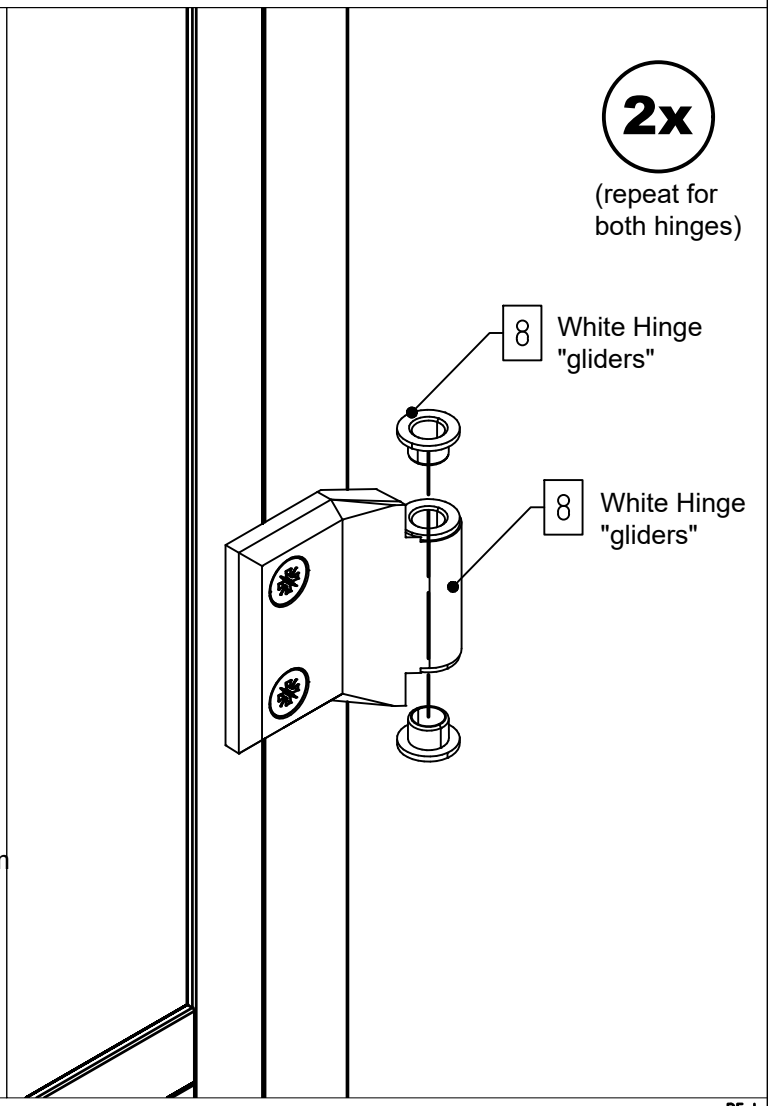
A Exterior View

Reverse View! Flip window over!



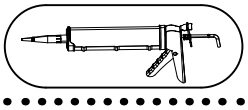
Install hinges



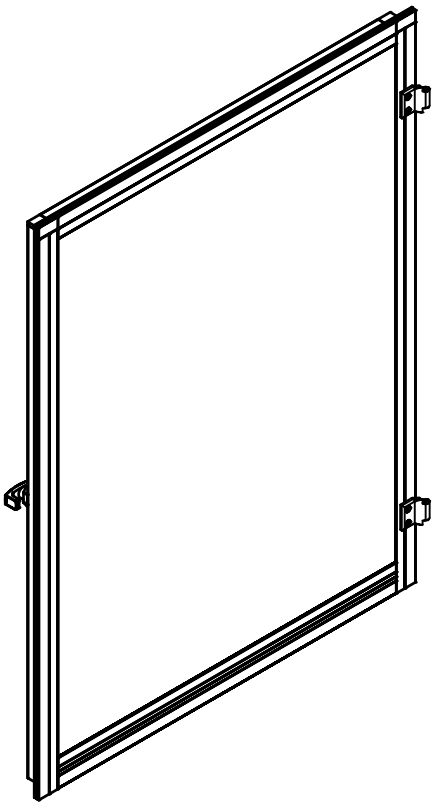


RF-I

A Exterior View

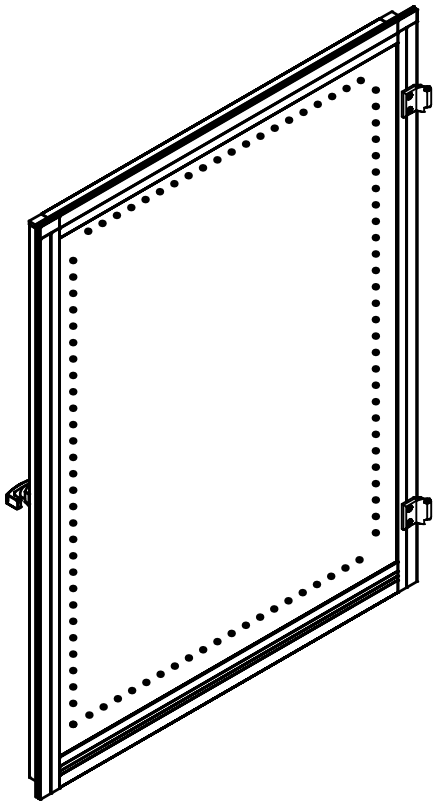


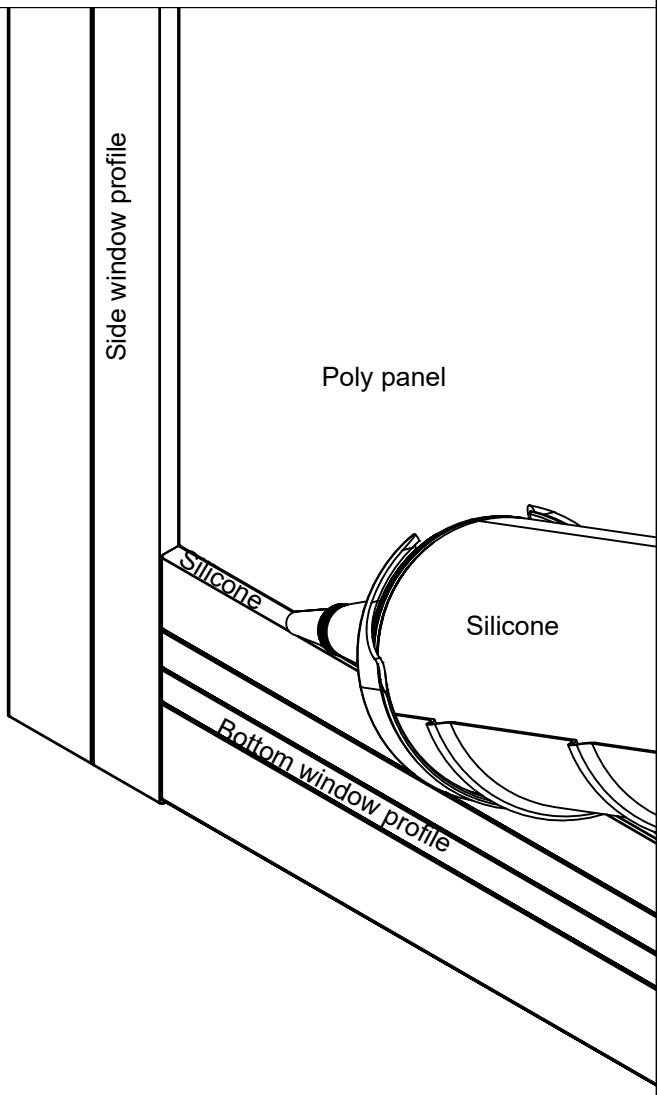
Silicone follows dotted line



Seal the polycarbonate to the frame

Run a bead of silicone along the seam where the polycarbonate meets the aluminum frame on the exterior of the rear window.



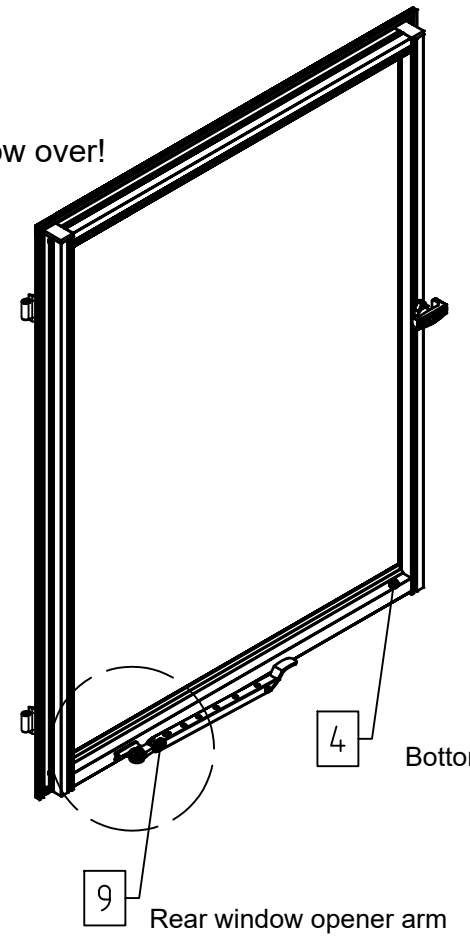


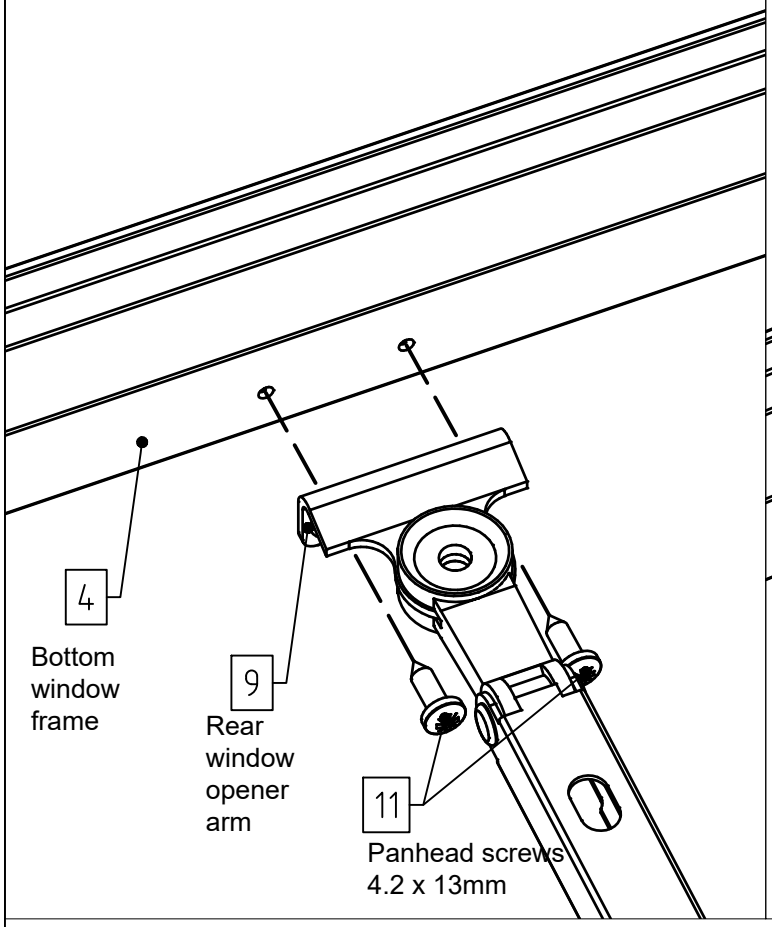
RF-J

Interior View

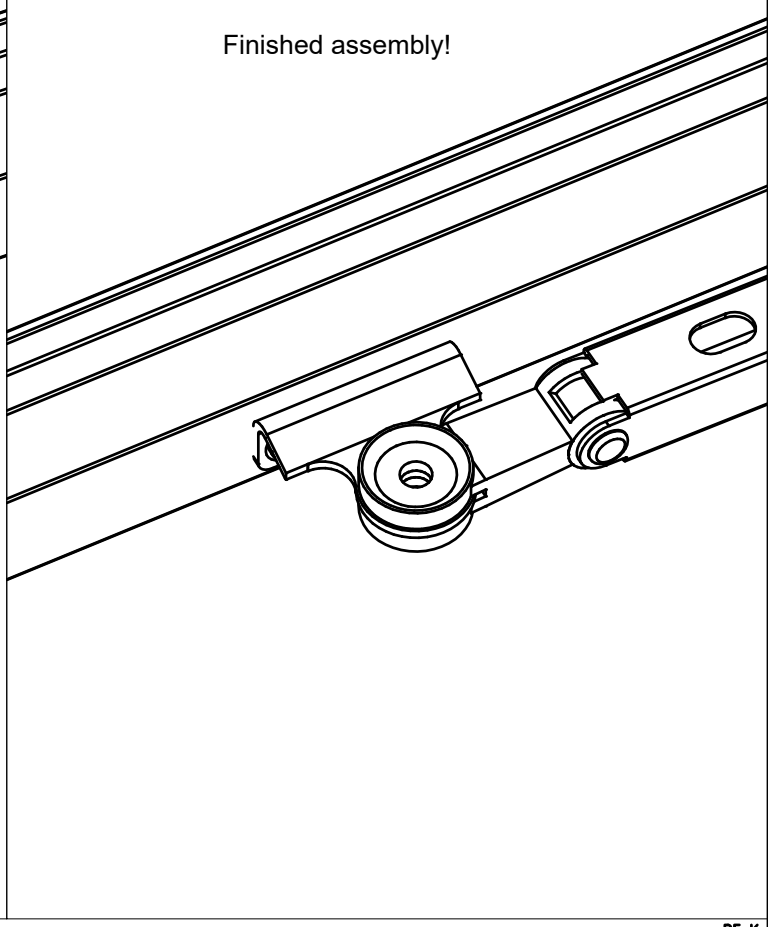
Reverse view! Flip window over!

Install Rear Window opener arm



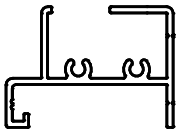
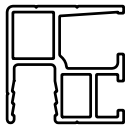
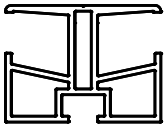
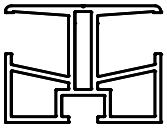
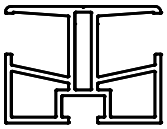
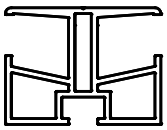
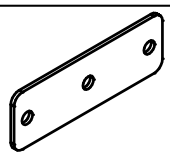
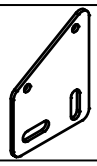
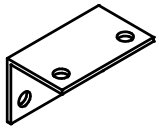
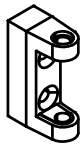


Finished assembly!



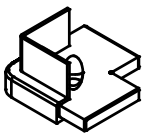
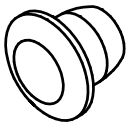
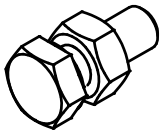
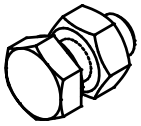
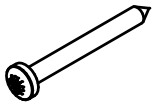
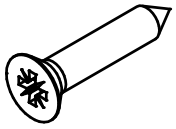
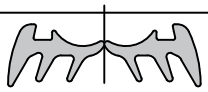
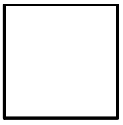
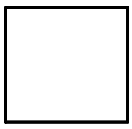
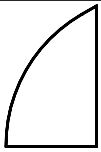
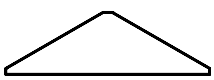
Rear Gable Assembly w/ Window

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P063–12–01–00–04–1 P063–13–01–00–04–1	Soil/Floor Profile (Gable)	1	RIGA S: 2238 mm 88 1/8" RIGA L: 2874 mm 113 1/8"
2		P076–12–01–00–04–1 P076–14–01–00–04–1	Edge curve left (Gable) Note: this is a curved piece!	1	RIGA S: 2629 mm 103 1/2" RIGA L: 2996 mm 117 15/16"
3		P076–13–01–00–04–1 P076–15–01–00–04–1	Edge curve right (Gable) Note: this is a curved piece!	1	RIGA S: 2629 mm 103 1/2" RIGA L: 2996 mm 117 15/16"
4		P077–43–01–00–04–1 P077–45–01–00–04–1	Vertical Frame Rear Gable Left - angle cut (left - from exterior)	1	RIGA S: 1854 mm 73" RIGA L: 2037 mm 80 3/16"
5		P077–58–01–00–04–1 P077–59–01–00–04–1	Vertical Frame Rear Gable Right - angle cut (right - from exterior)	1	RIGA S: 1854 mm 73" RIGA L: 2037 mm 80 3/16"
6		P077–03–01–00–04–1	Crossbar for middle section (upper and lower)	2	RIGA S: 758 mm 29 13/16"
7		P077–05–01–00–04–1 P077–01–01–00–04–1	Crossbar for left and right sections	2	RIGA S: 702 mm 27 5/8" RIGA L: 1020 mm 40 3/16"
8		9999000030	3 hole connecting plate	2	(90 x 30 mm) 3 9/6" x 1 3/16"
9		9999000028	Angled connecting Plate	2	55 x 68.7mm 2 3/16" x 2 11.16"
10		9999000416	L bracket for rear window opener	1	(50 x 30 x 2 mm) 1 15/16" x 1 3/16" x 1/16"
11		9999000390	Pin for rear window opener	1	
12		9999000358	Hinge bracket - includes hinge pin	2	

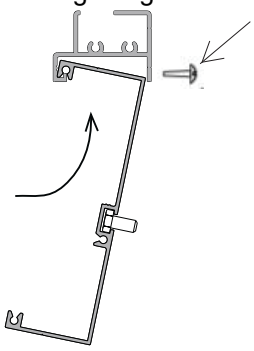
Rear Gable Assembly w/ Window

Packlist and Parts

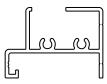
Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000003	Soil Profile Corner Connector (Black)	2	
14		9999000097	Blind Plug (to cover drill holes on edge curves)	2	
15		9999000183 9999000128	Bolt M6 x 16mm Nut M6	10	DIN 933 / 934
16		9999000124 9999000128	Bolt M6 x 12mm Nut M6	4	DIN 933 / 934
17		9999000144	Panhead Screw 4.2 x 13mm (attachments and connections, hinges)	6	DIN 7981
18		9999000150	Panhead Screw 4.8 x 45mm (to attach left and right crossbars)	4	DIN 7981
19		9999000163	Countersunk screws 4.8 x 25mm (for hinge brackets)	4	DIN 7982
20	 Pull apart to make 2 strands!	9999000119	Wedge Gasket 3-5mm Note: this is the thinner of the wedge gaskets!	3	RIGA S: 1x 768 mm 30 1/4" 2x 712 mm 28 1/16" RIGA L: 1x 768 mm 30 1/4" 2x 1030 mm 40 9/16"
21			Polycarbonate Panel (left and right lower)	2	RIGA S: 730 x 728 mm 28 3/4" x 28 11/16" RIGA L: 1048 x 728 mm 41 1/4" x 28 11/16"
22			Polycarbonate Panel (under window)	1	787 x 728 mm 31" x 28 11/16"
23			Polycarbonate Panel (left and right upper)	2	RIGA S: 730 x 1135 mm 28 3/4"x44 11/16" RIGA L. 1048 x 1319 mm 41 1/4" x 51 15/16"
24			Polycarbonate Panel (Gable Triangle) 779 x 239 mm 30 11/16" x 9 7/16"	1	CAREFUL!!! Front gable triangle and rear gable triangle are different!!!

Interior View

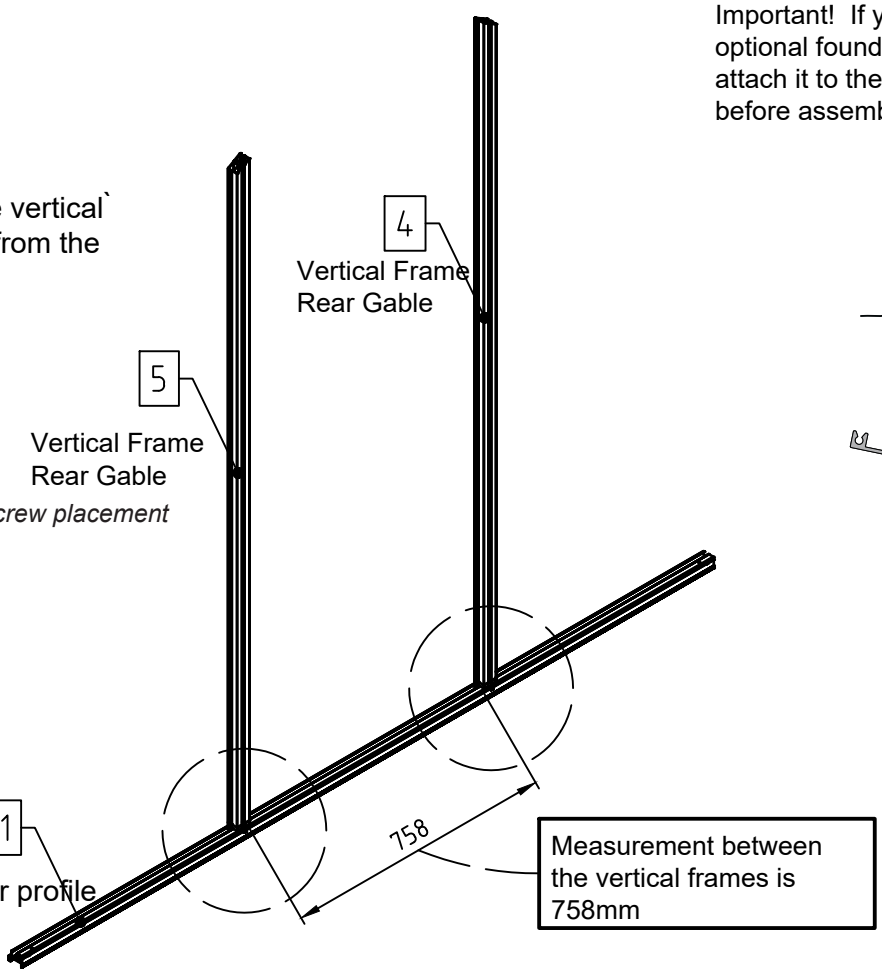
Important! If you are using the optional foundation frame - attach it to the floor/soil profile before assembling the gable!

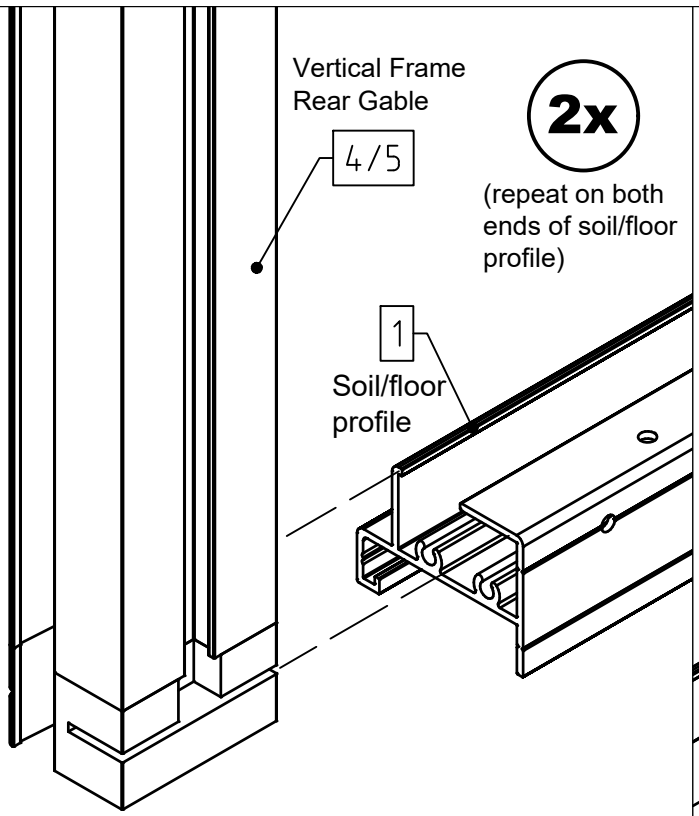


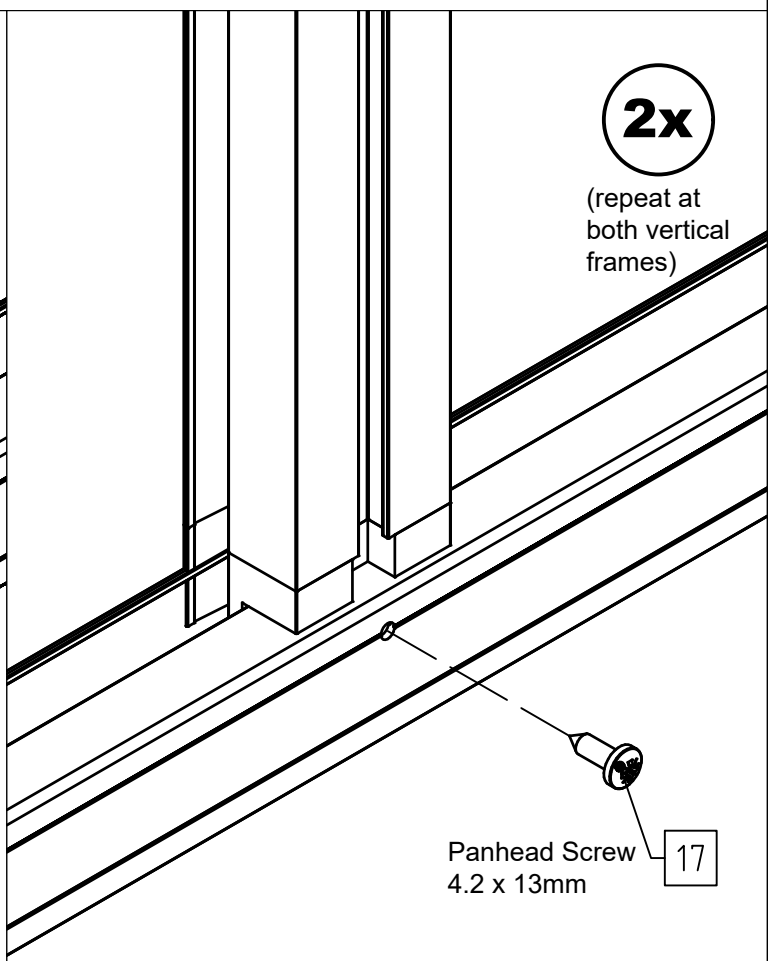
Note: The angled tips of the vertical` frames should angle down from the center



Self-tapping screw placement

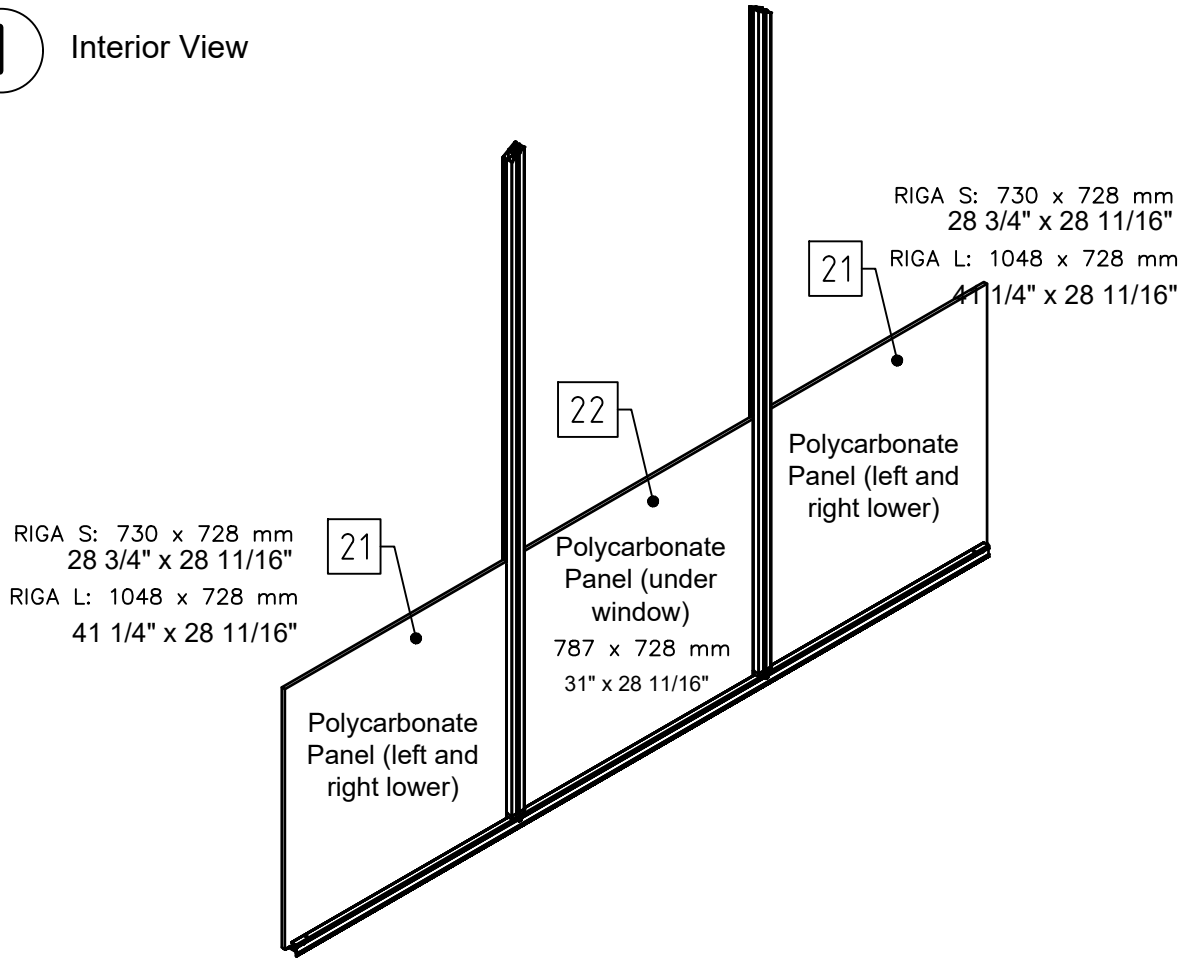


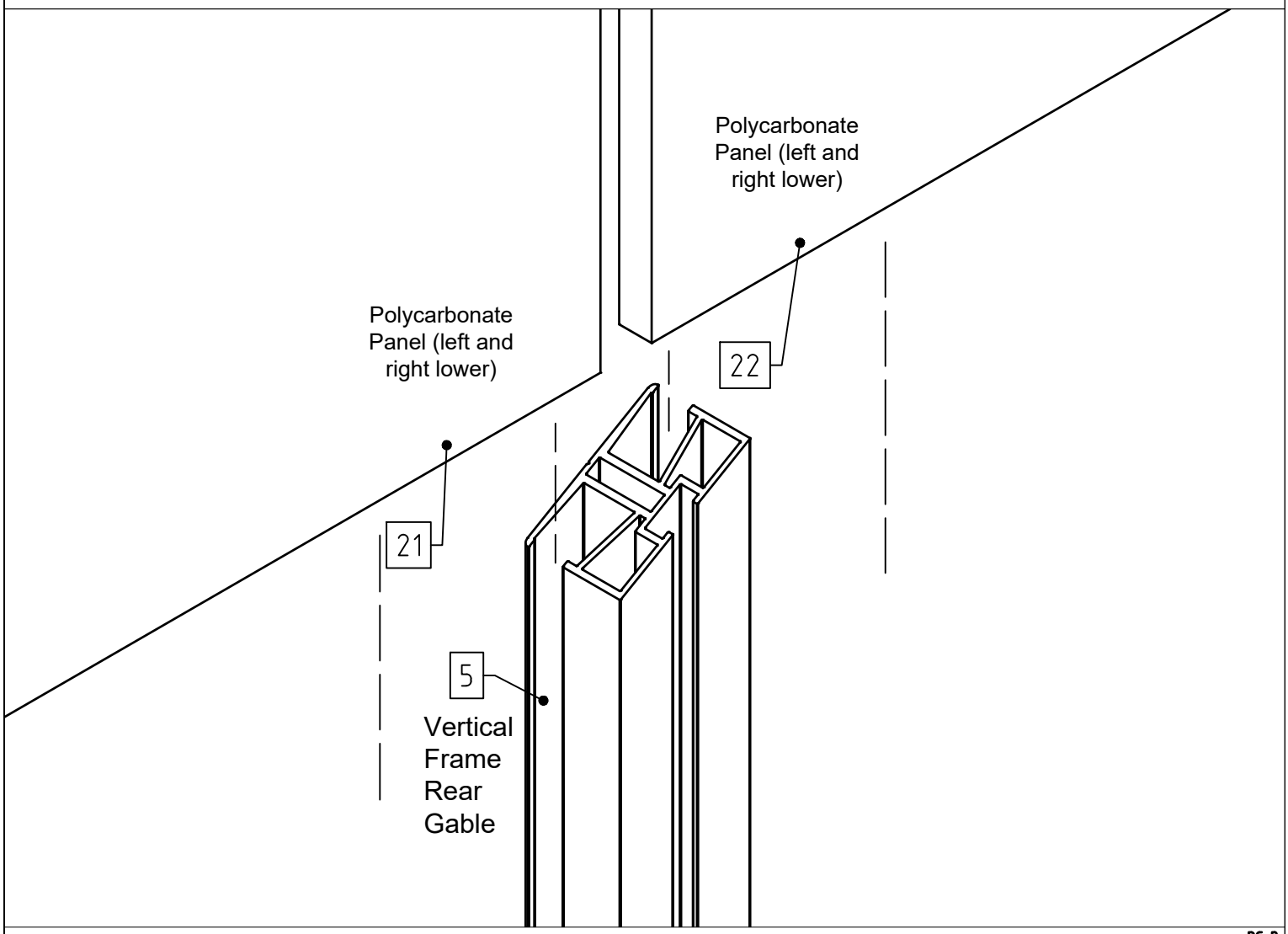




RG-A

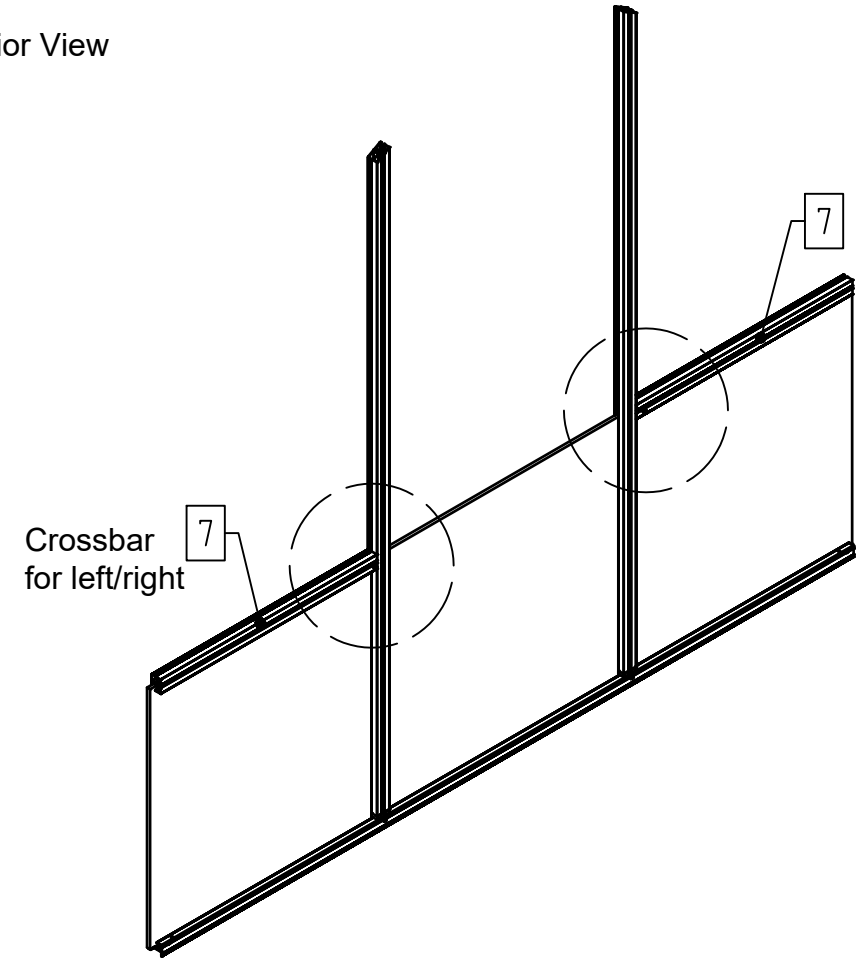
I Interior View





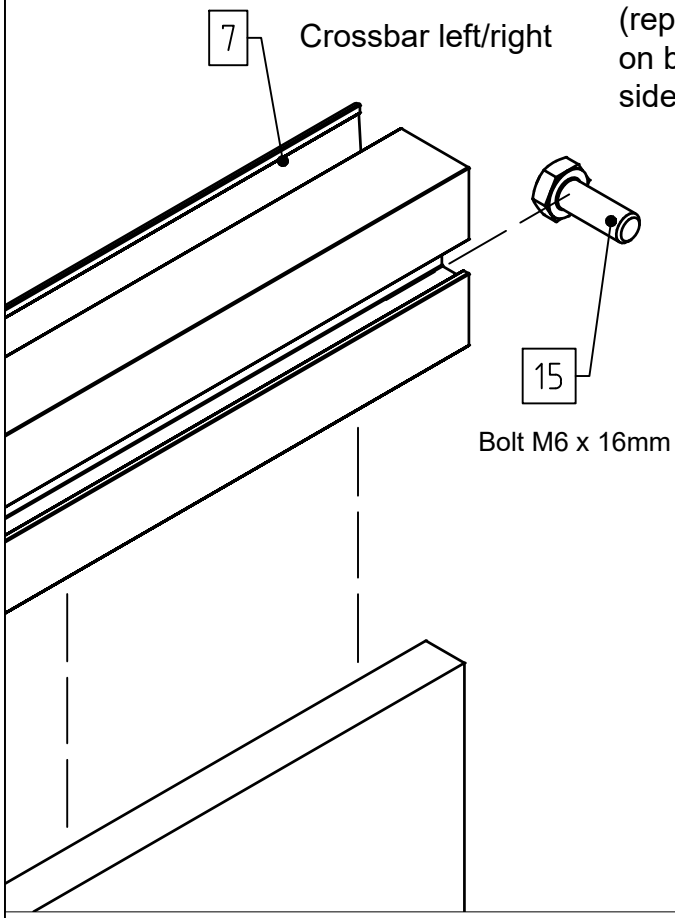
RG-B

I Interior View



2x

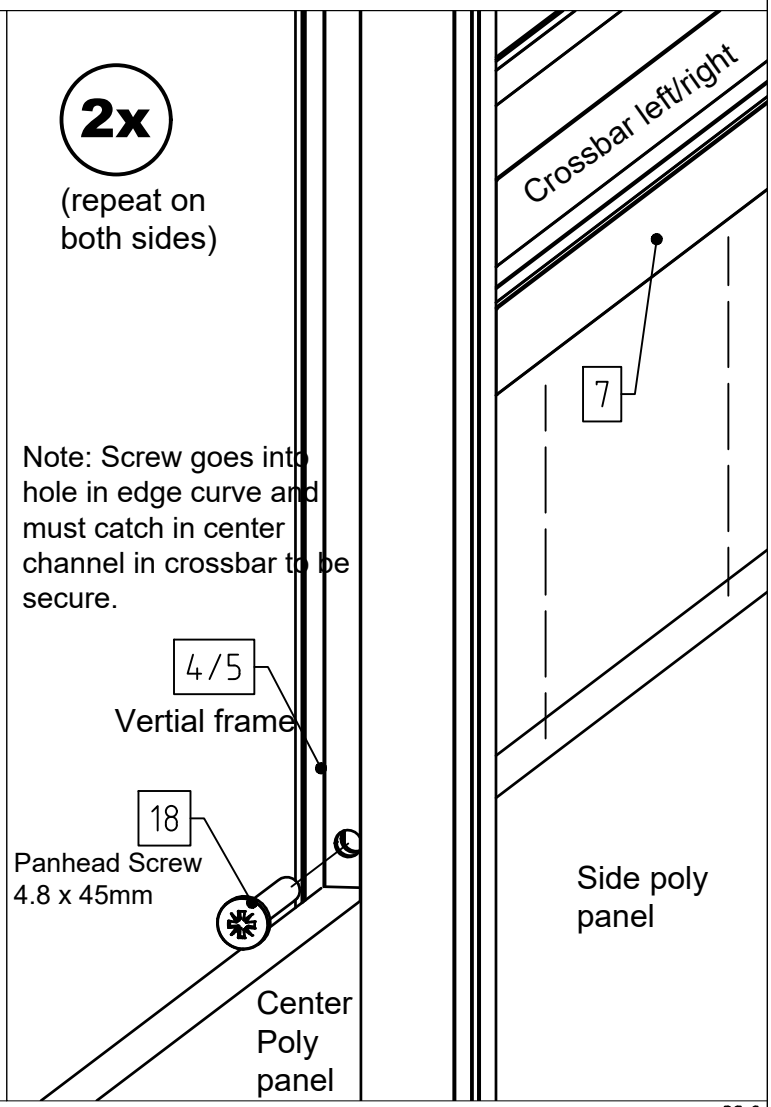
(repeat on both sides)



2x

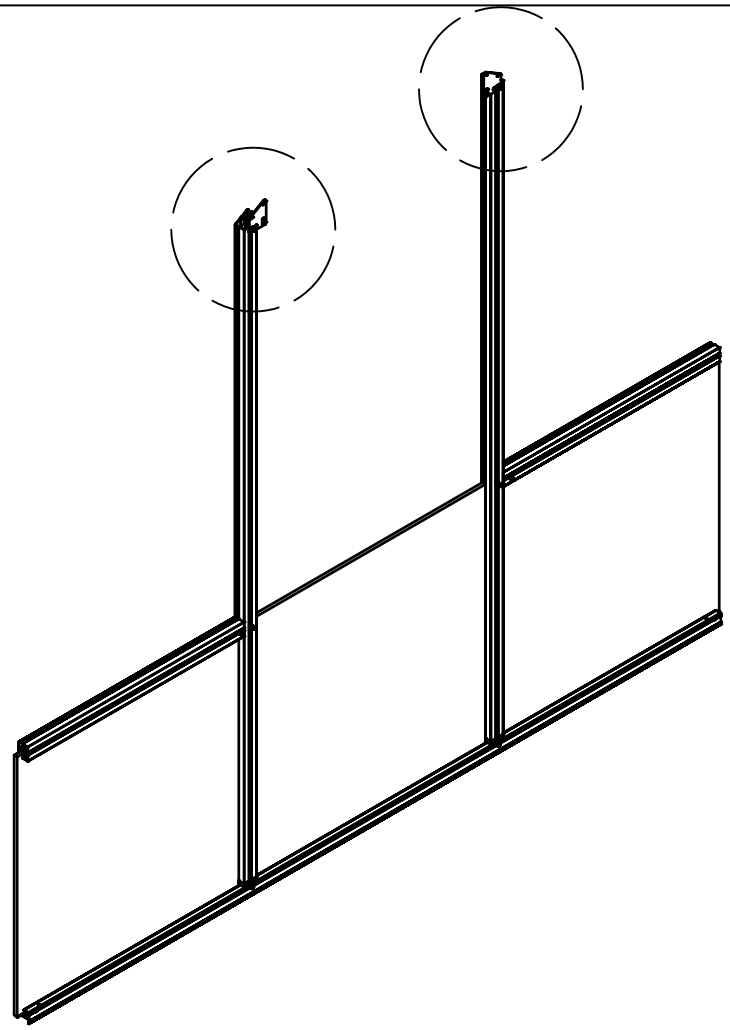
(repeat on both sides)

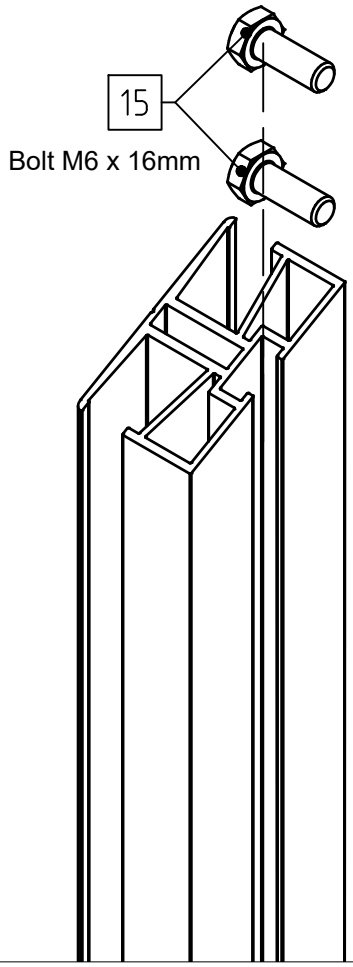
Note: Screw goes into hole in edge curve and must catch in center channel in crossbar to be secure.



RG-C

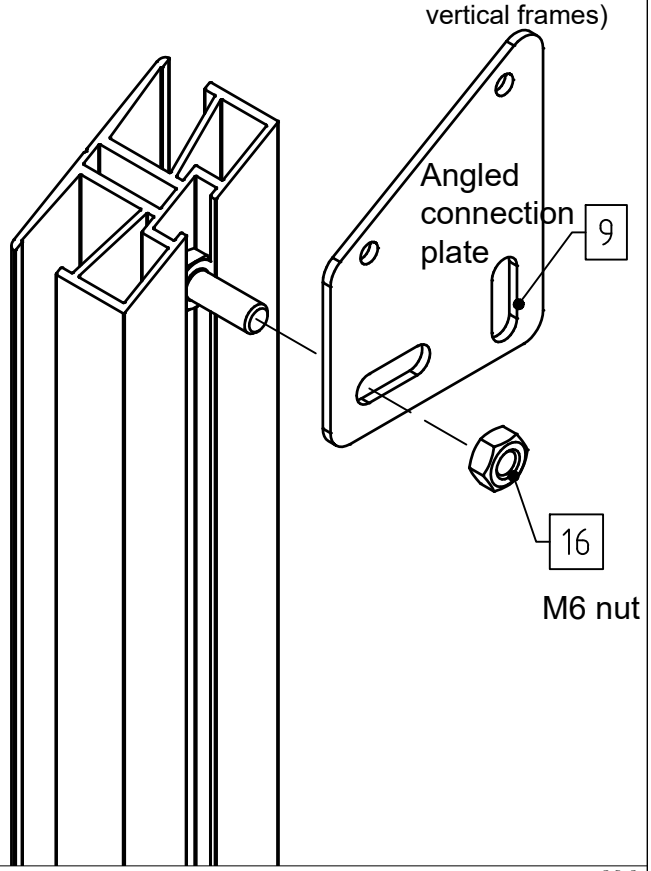
I Interior View





2x

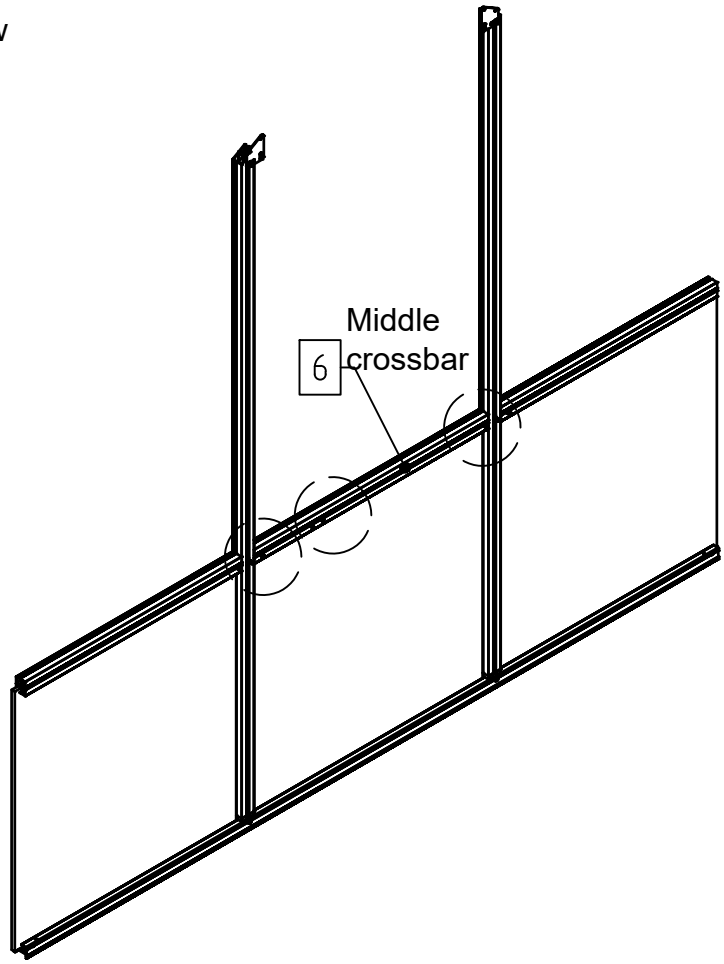
(repeat on both left and right vertical frames)

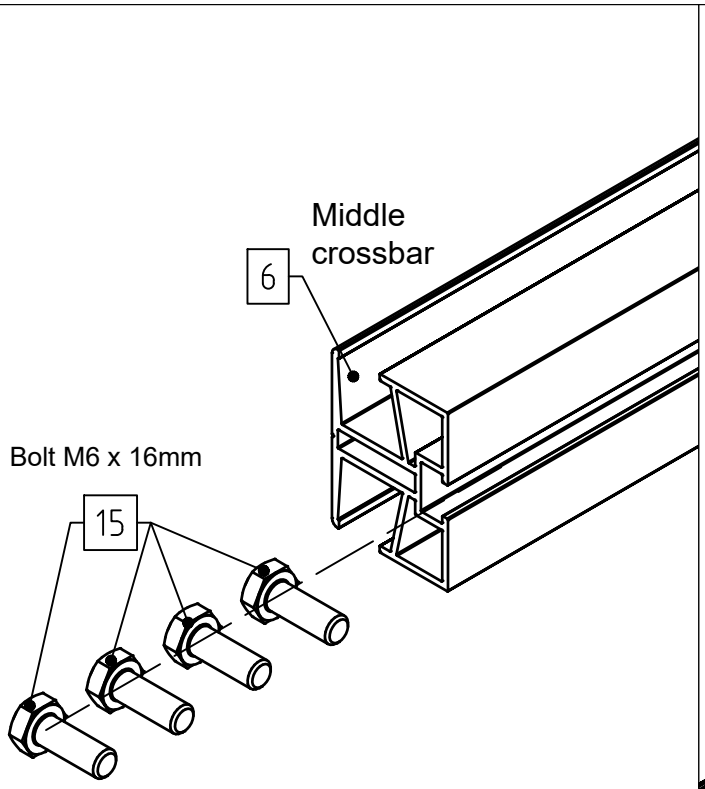


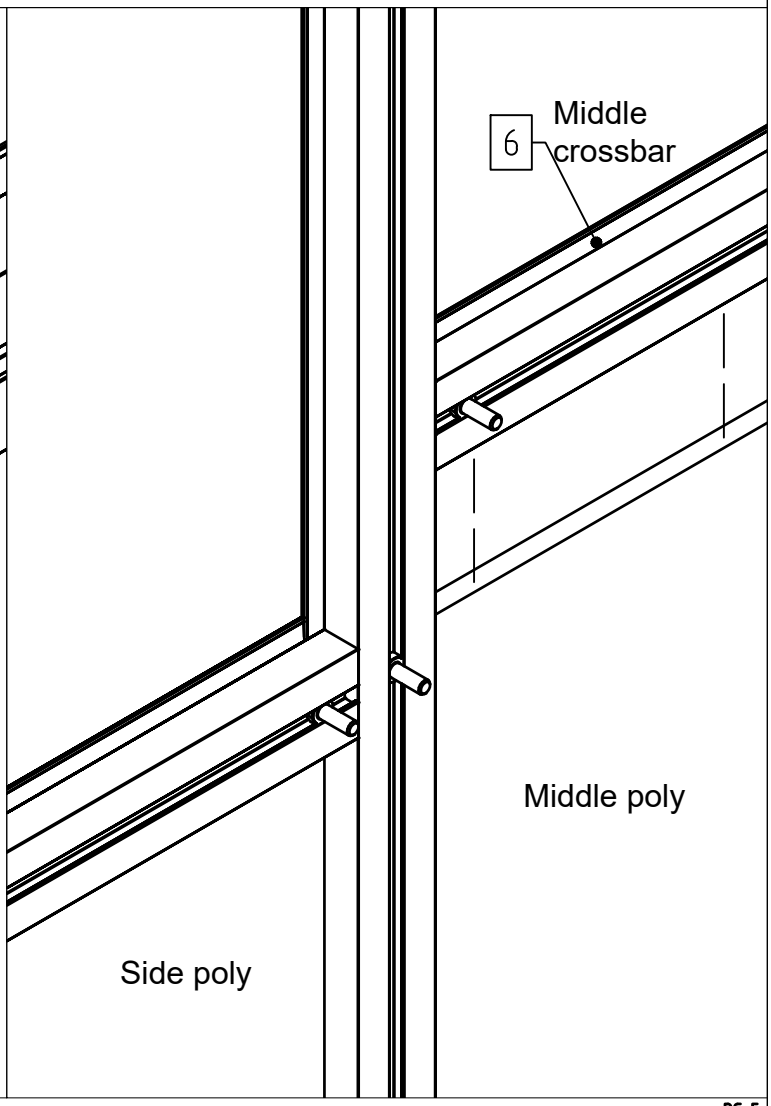
2x

(repeat on both left and right vertical frames)

Interior View



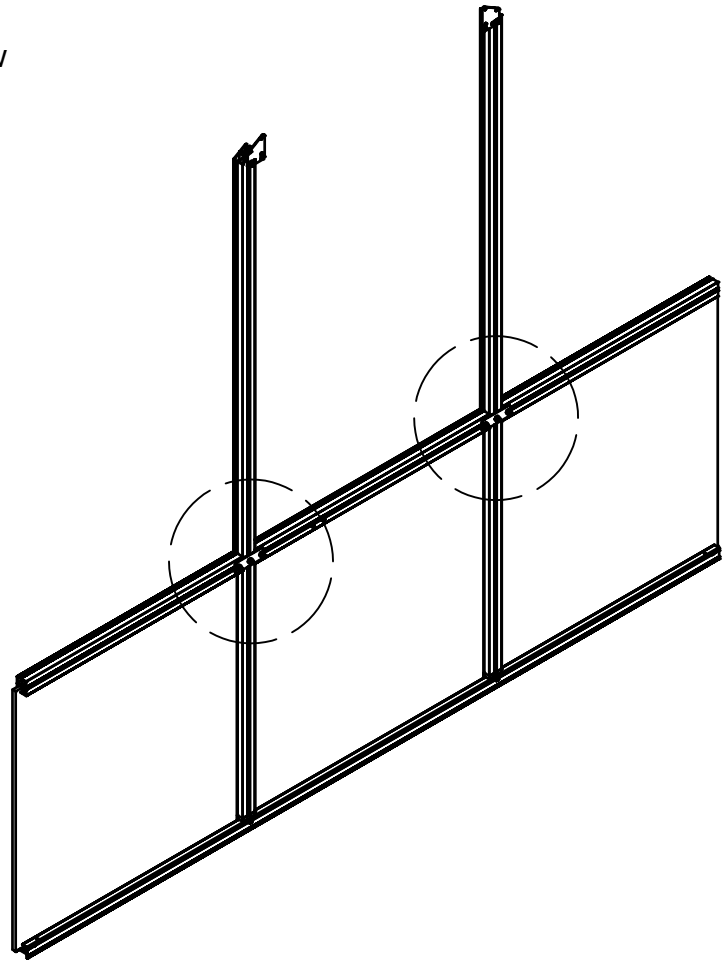


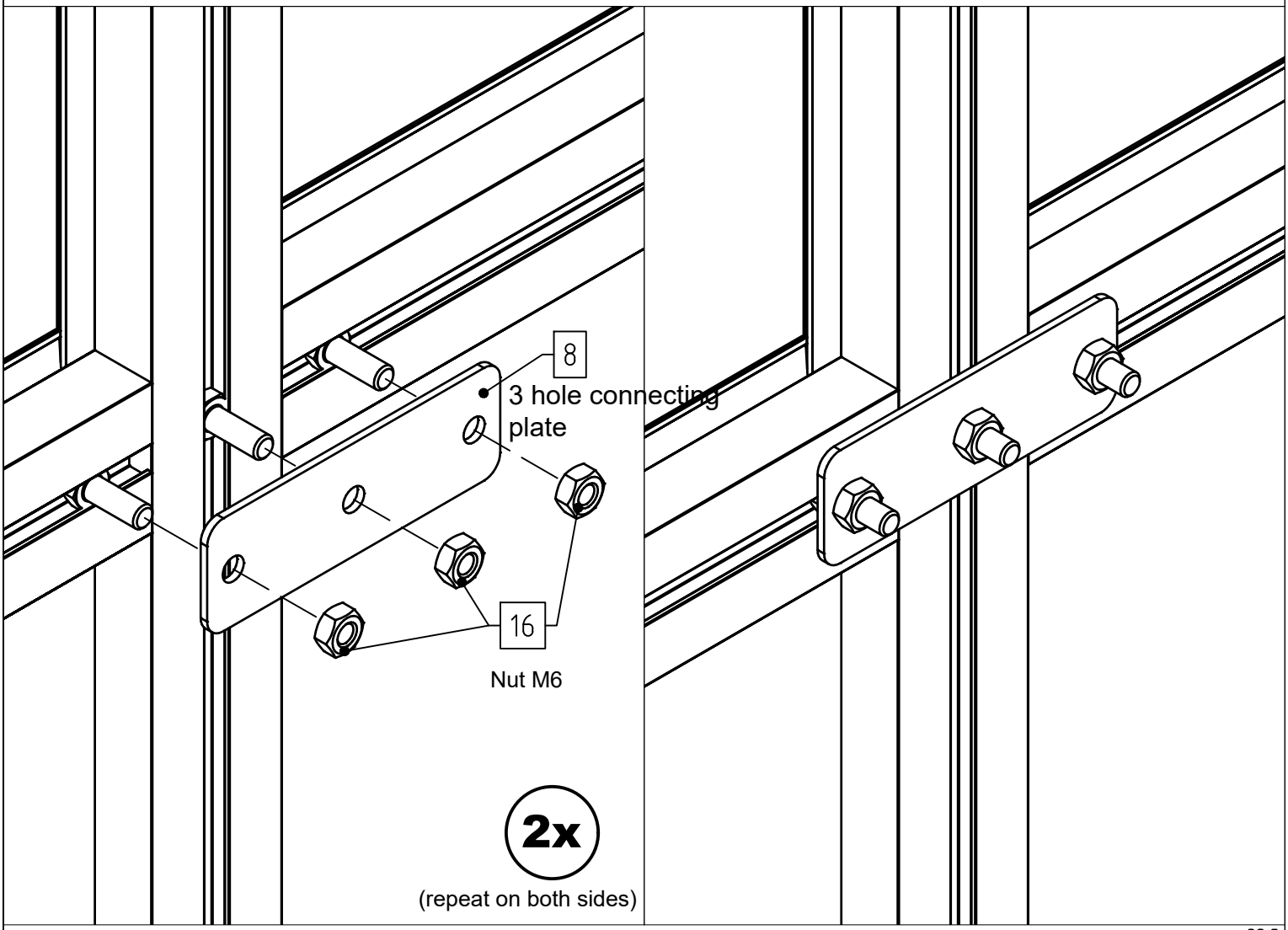


RG-E

I

Interior View

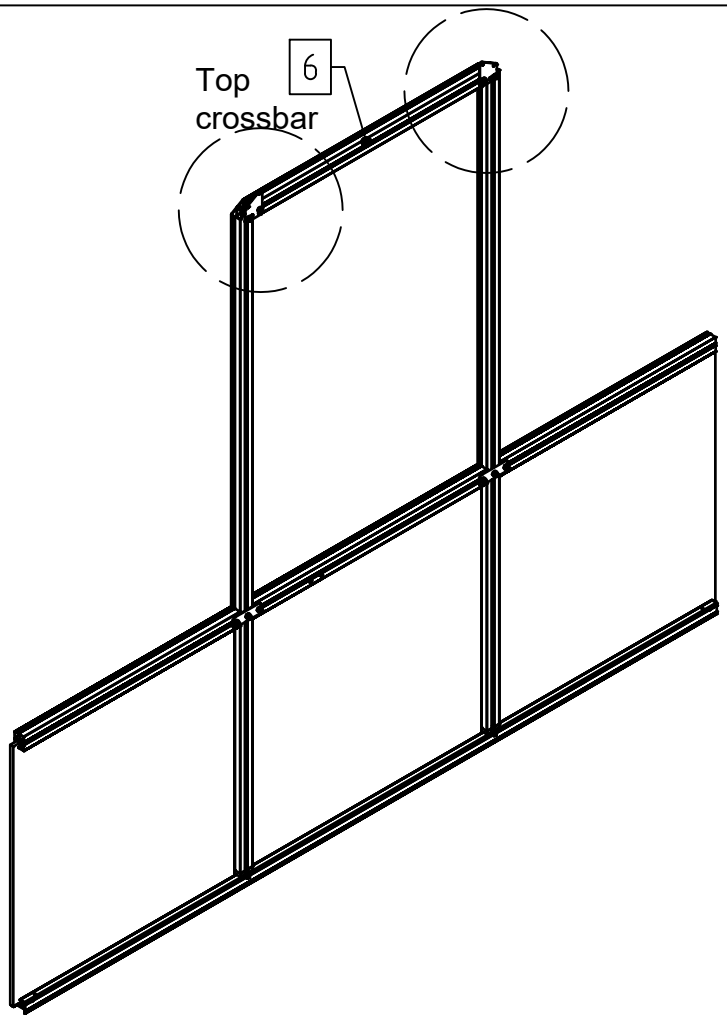


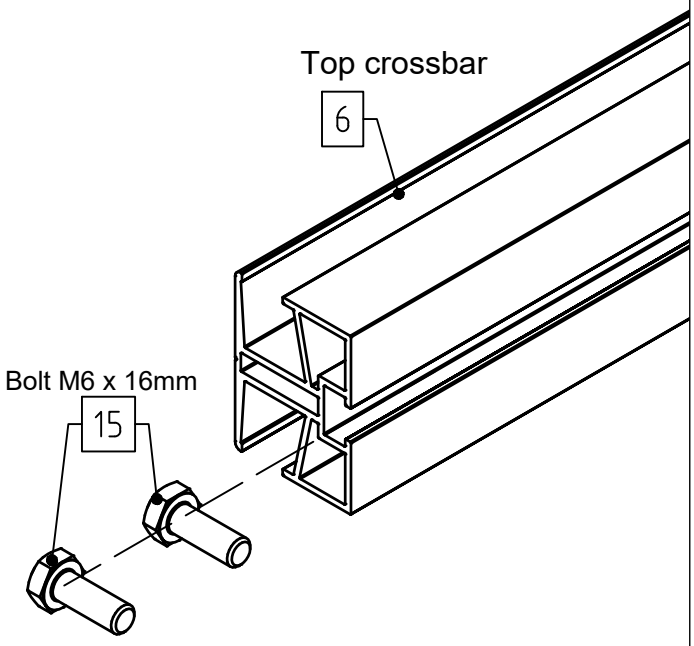


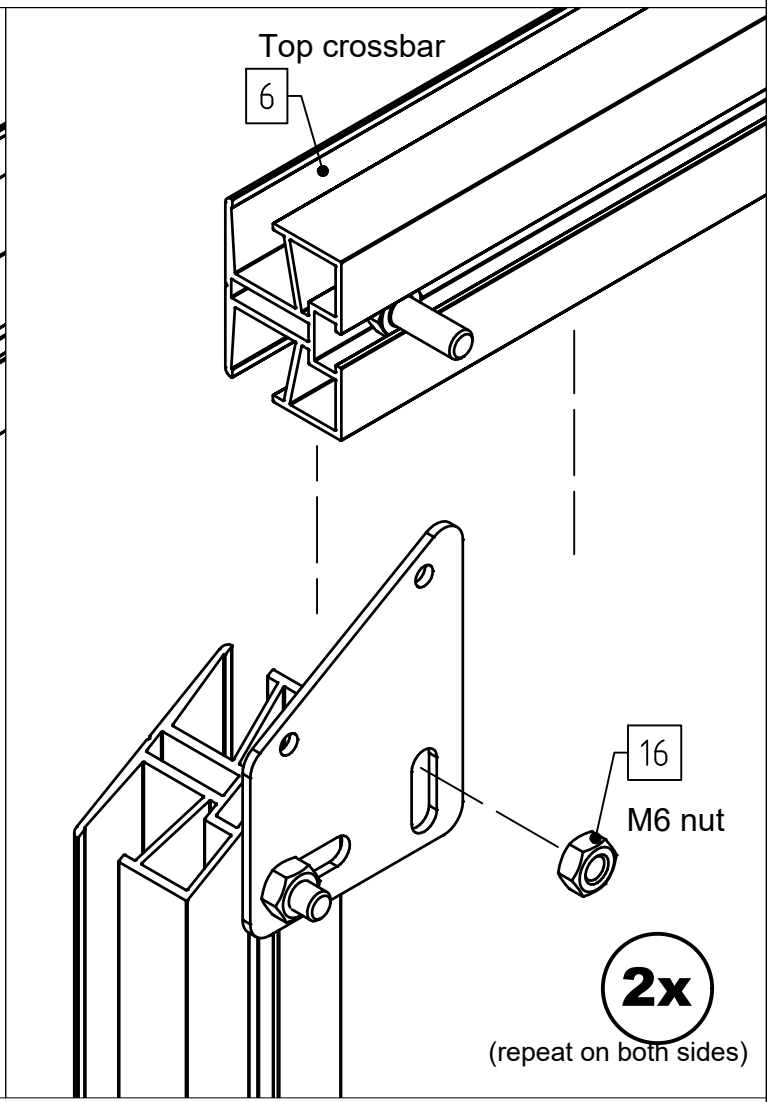
2x

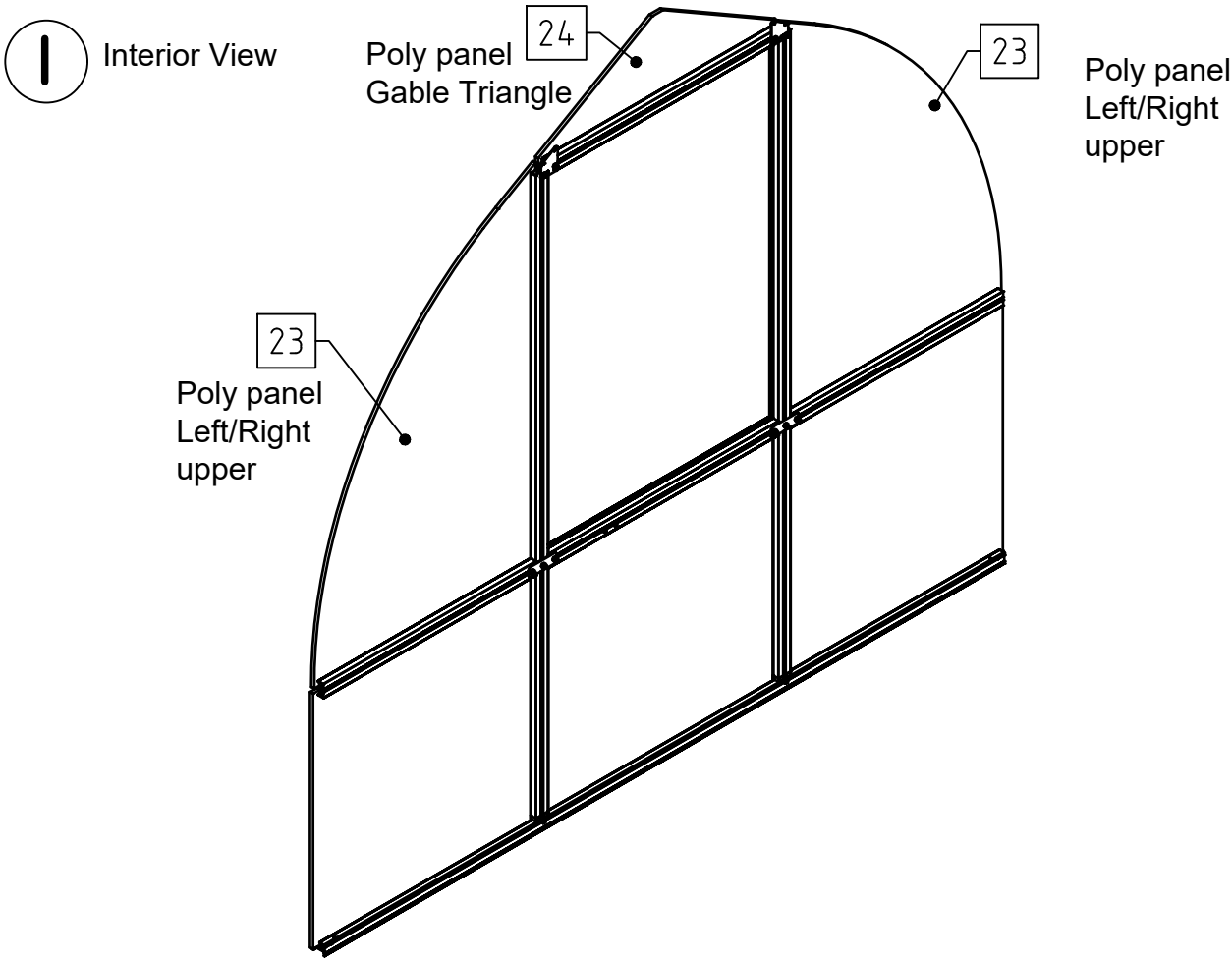
(repeat on both sides)

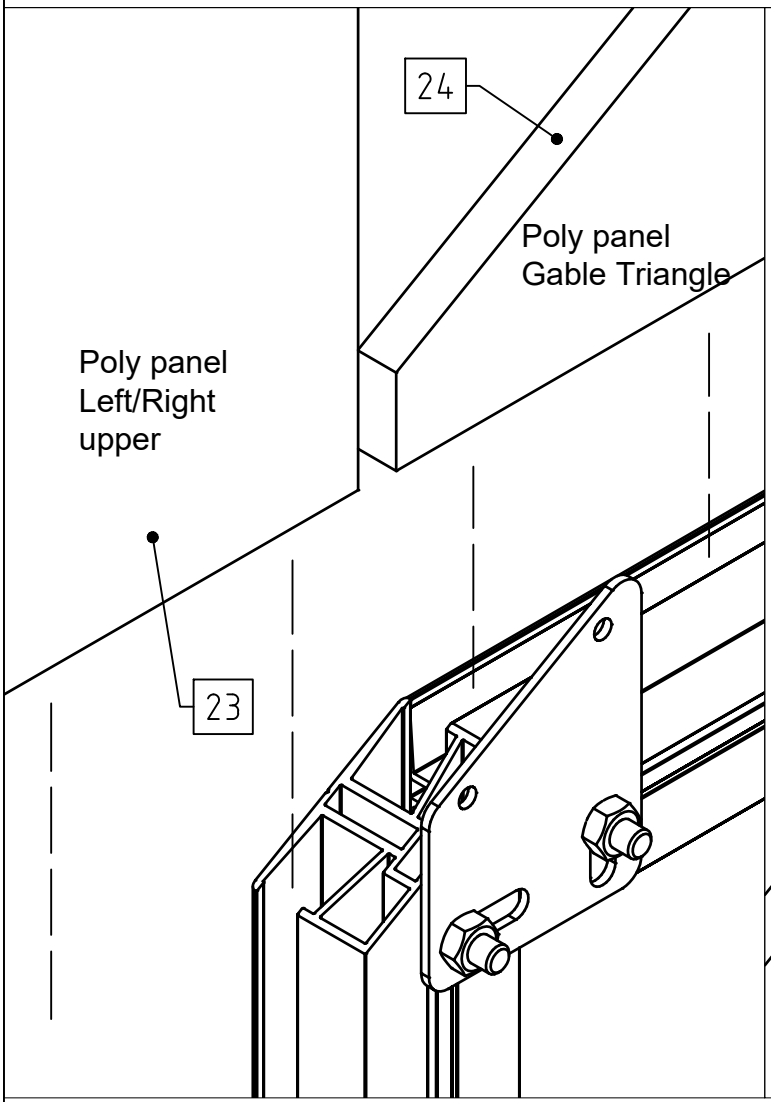
Interior View

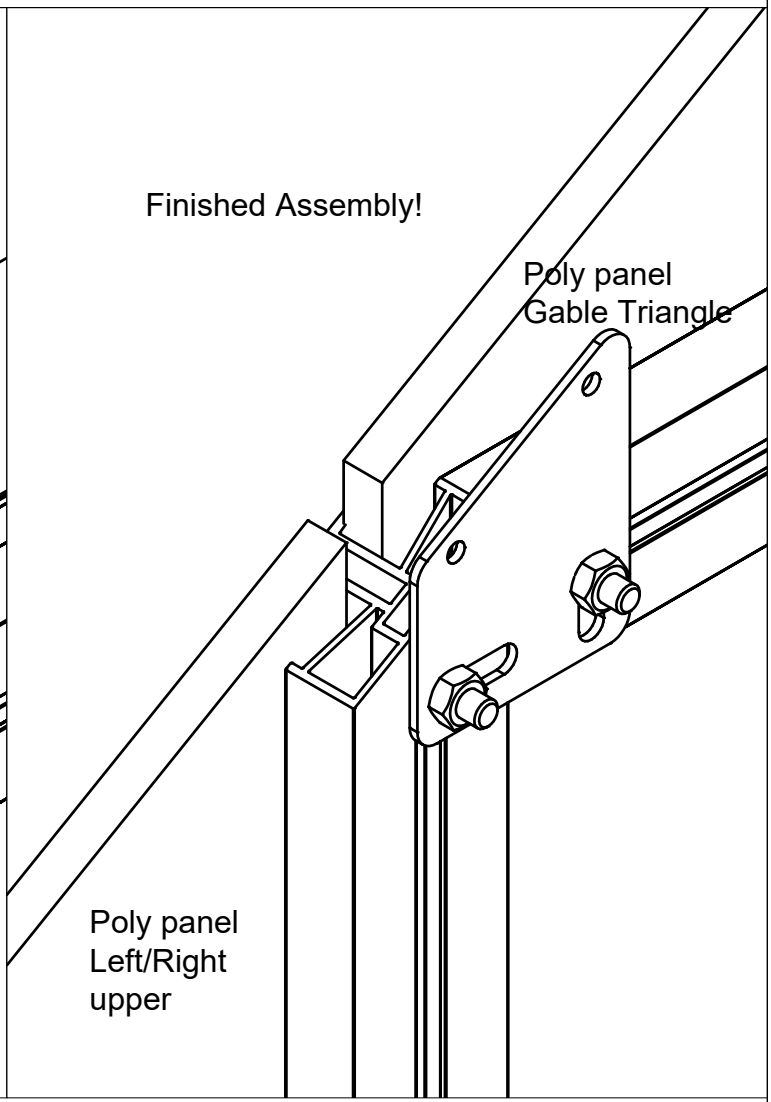




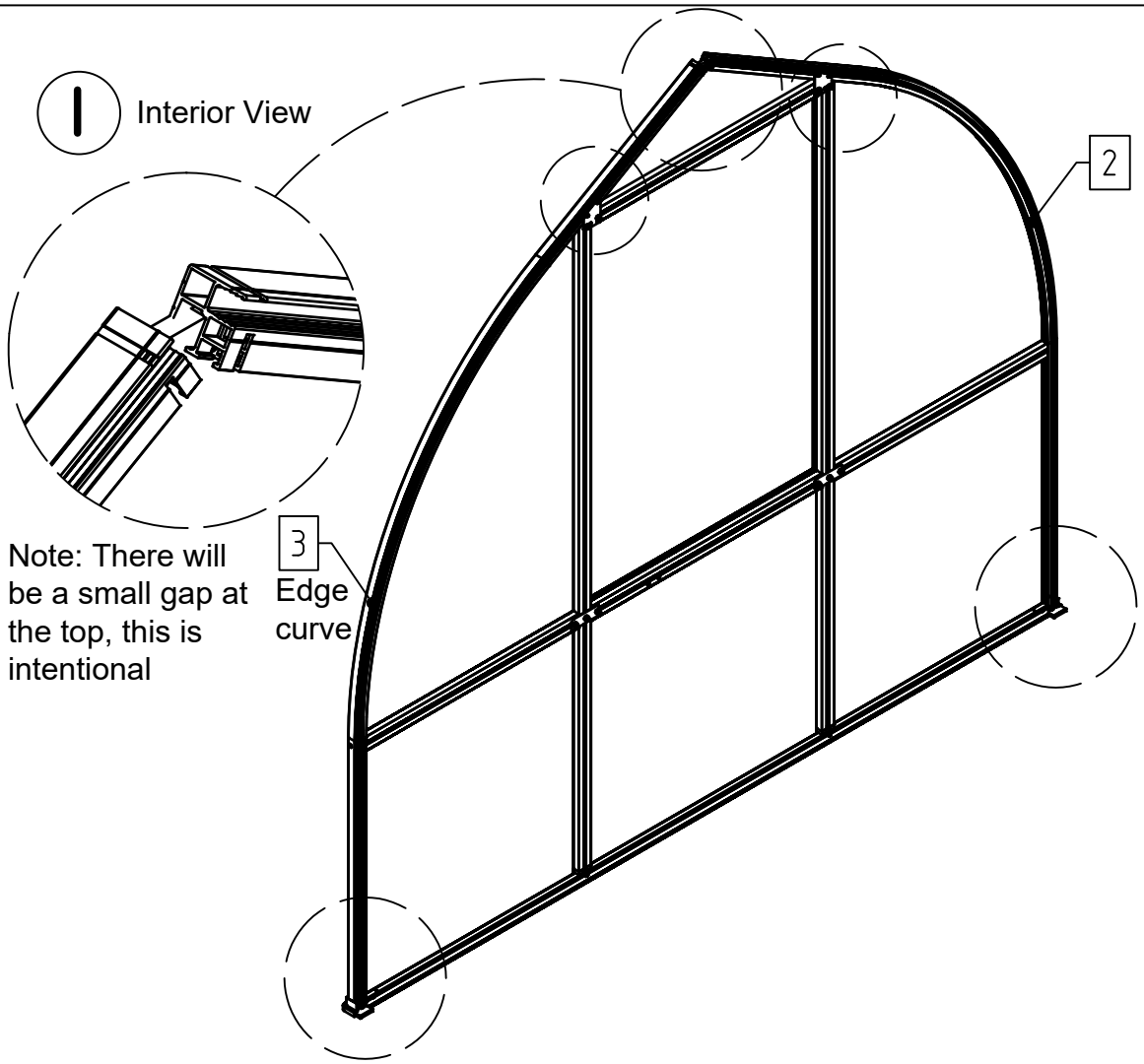


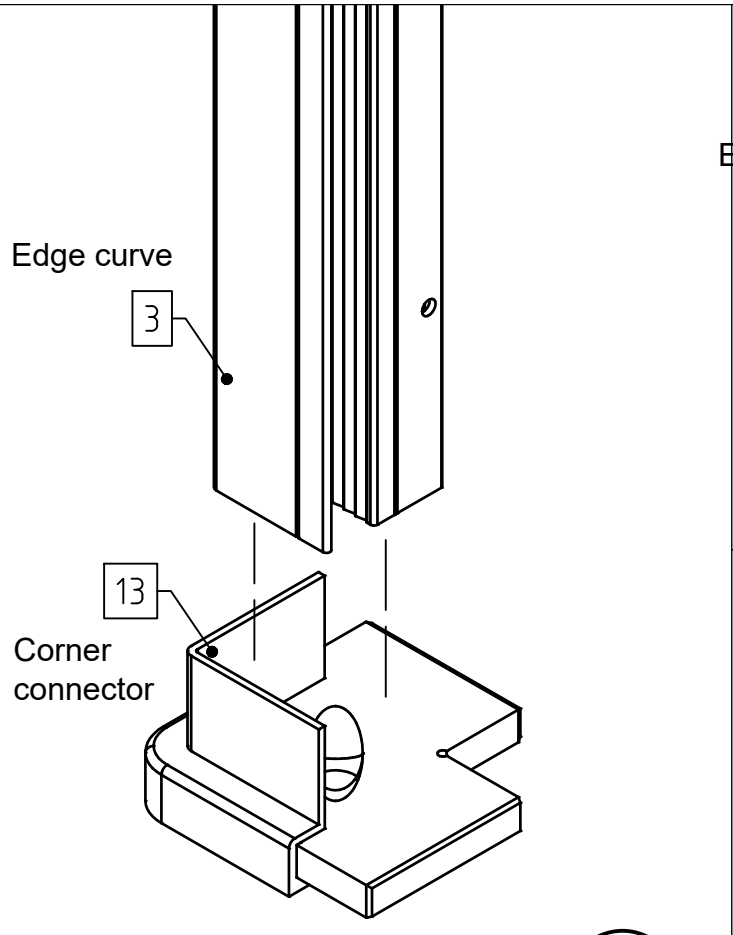

Interior View
Poly panel
Gable Triangle
24
23
Poly panel
Left/Right
upper
23
Poly panel
Left/Right
upper

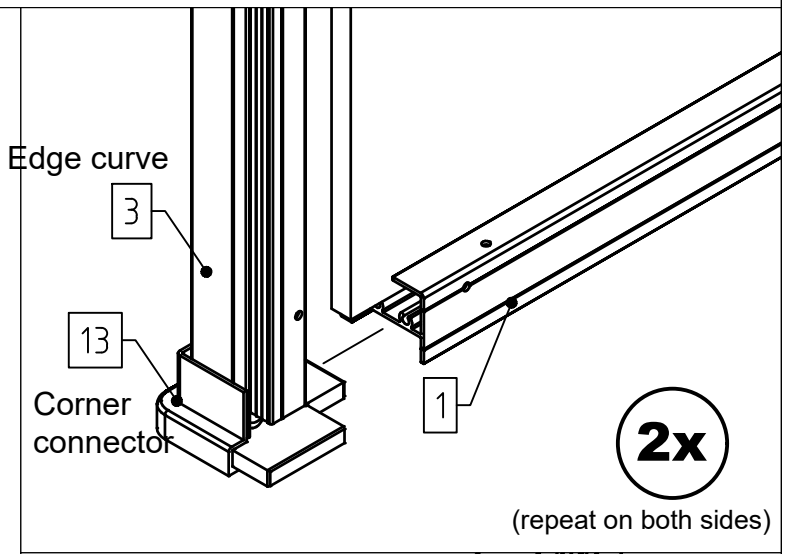

24
Poly panel
Gable Triangle
Poly panel
Left/Right
upper
23

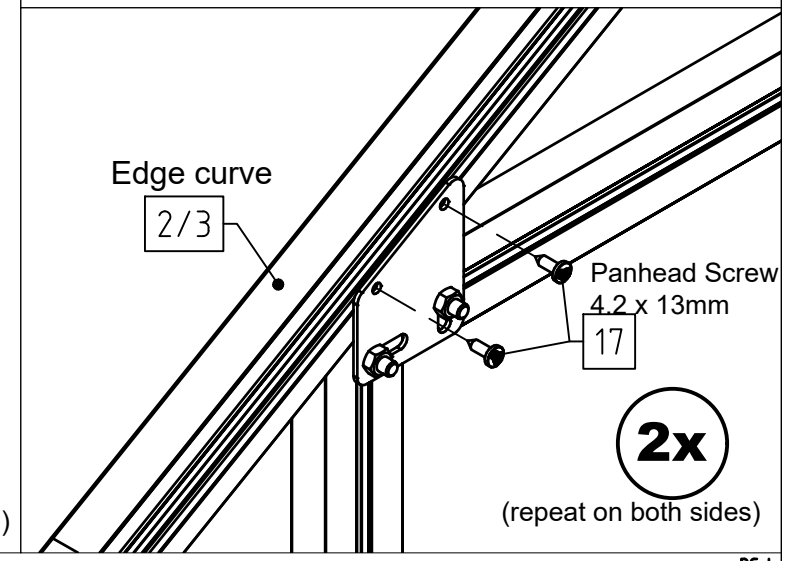

Finished Assembly!
Poly panel
Gable Triangle
Poly panel
Left/Right
upper

RG-H

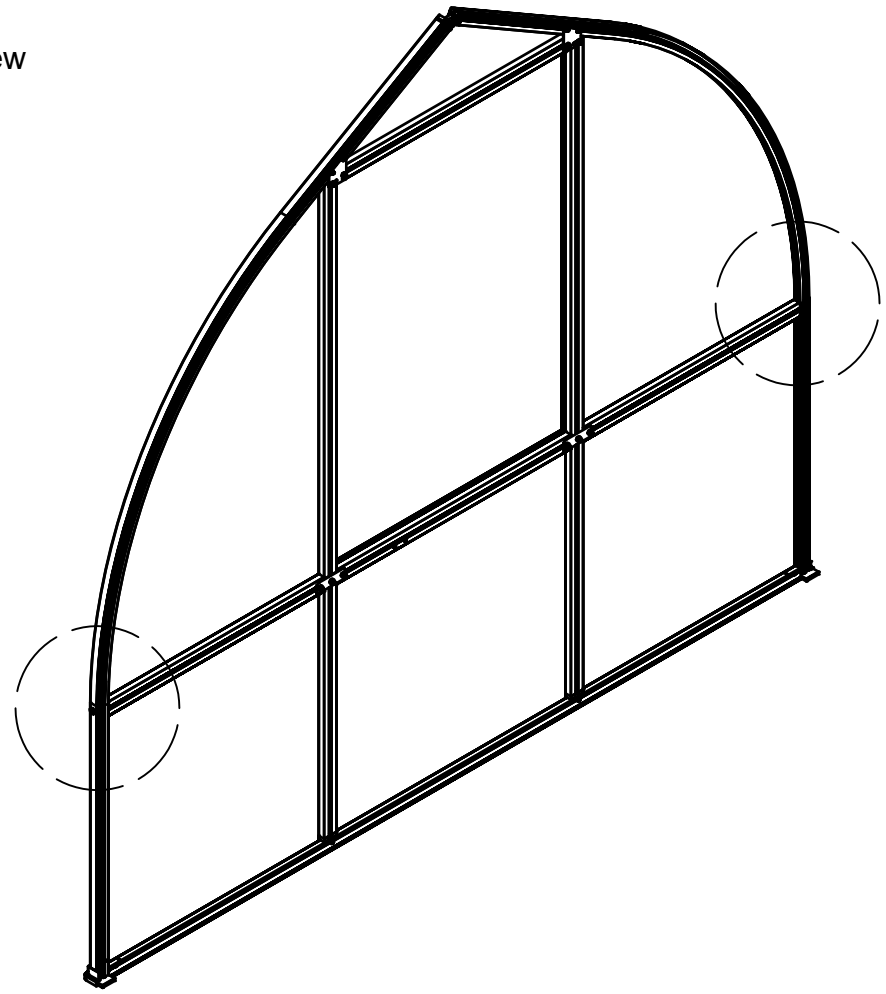

I
Interior View
2
Edge curve
3
Edge curve
Note: There will be a small gap at the top, this is intentional


Edge curve
3
13
Corner connector
2x
(repeat on both sides)


Edge curve
3
13
Corner connector
1
2x
(repeat on both sides)

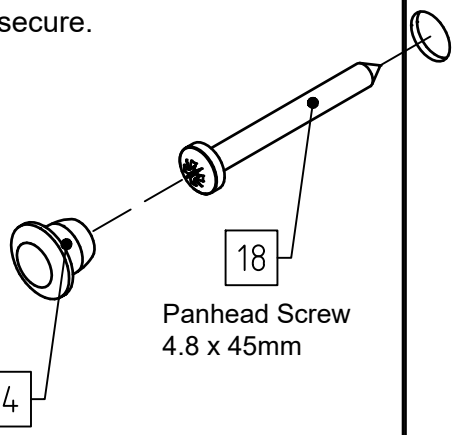

Edge curve
2/3
Panhead Screw
4.2 x 13mm
17
2x
(repeat on both sides)

I Interior View



2/3
Edge curve

Note: Screw goes into hole in edge curve and must catch in center channel in crossbar to be secure.

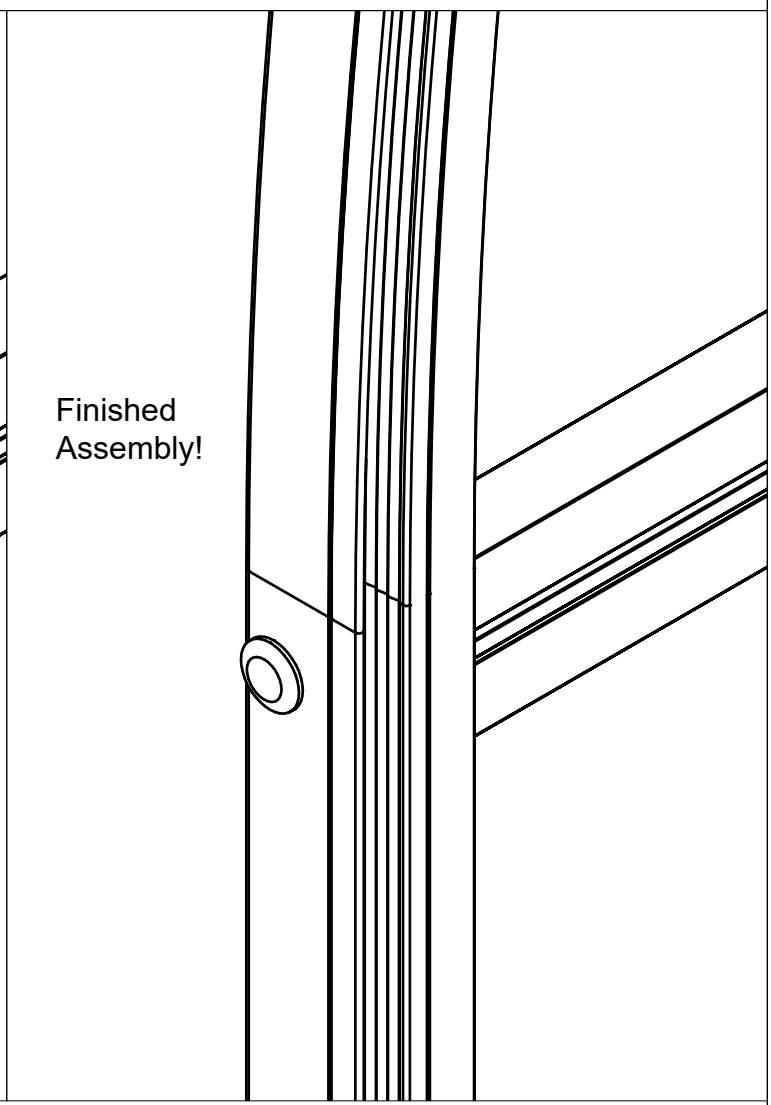


18
Panhead Screw
4.8 x 45mm

14
Blind plug to cap hole

2x
(repeat on both edge curves)

Finished Assembly!

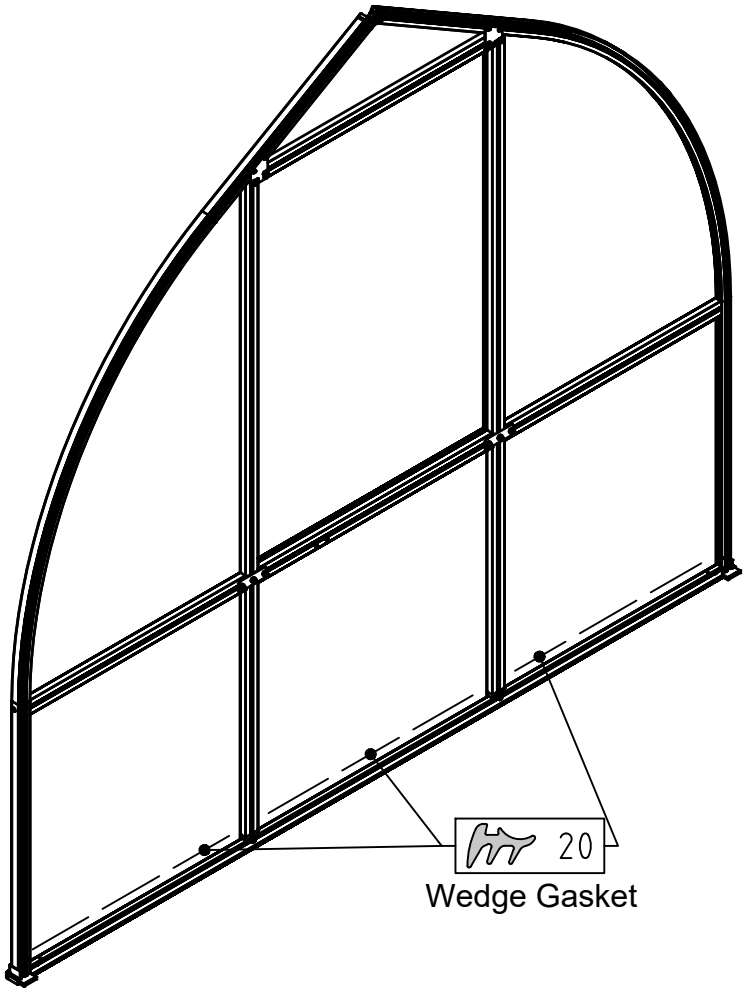


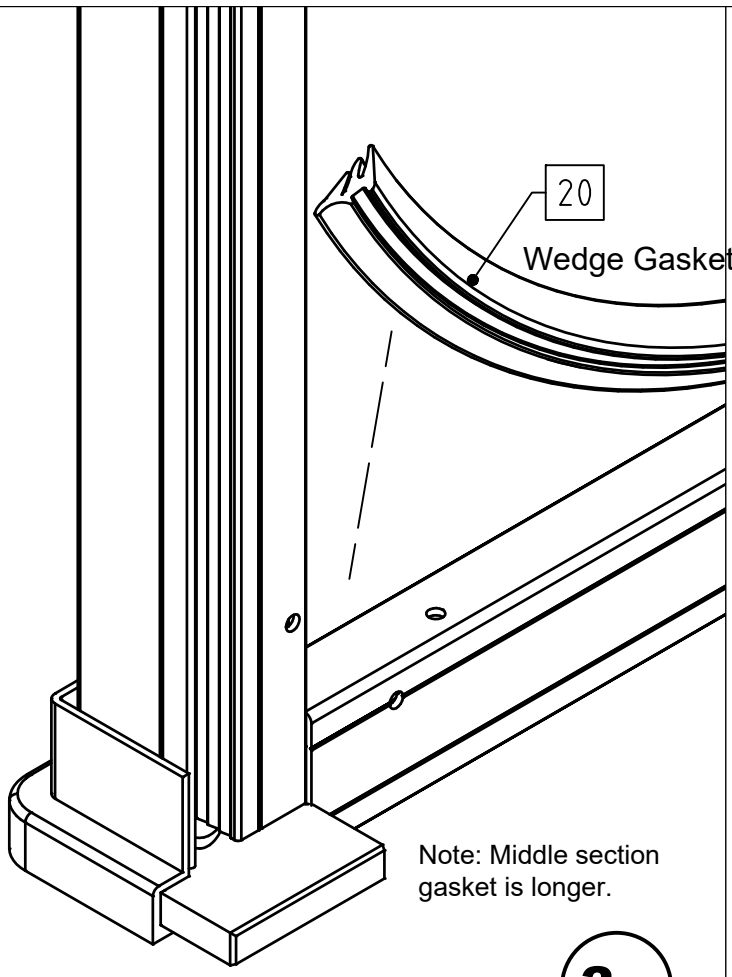
RG-J

Interior View

Wedge Gasket

Note: The gasket can shrink over a long period. It is recommended to have the wedge gasket slightly longer and compress it together as you push it in.

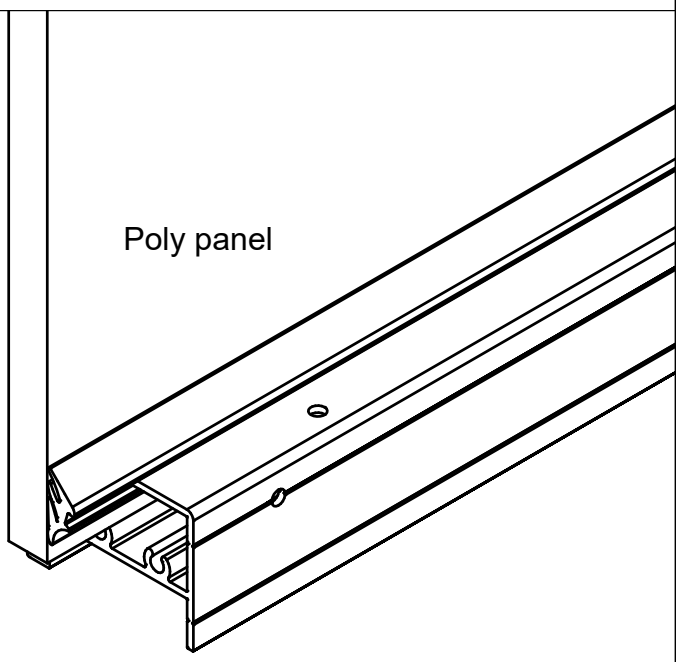




Note: Middle section gasket is longer.

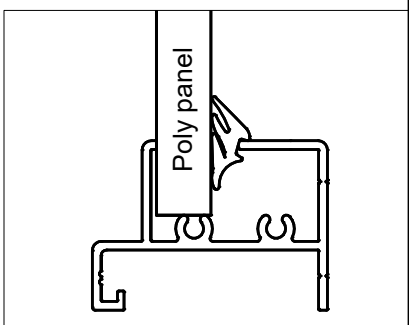
3x

repeat for 3 sections)



Note:Look closely at orientation of wedge gasket

VD Simplified View

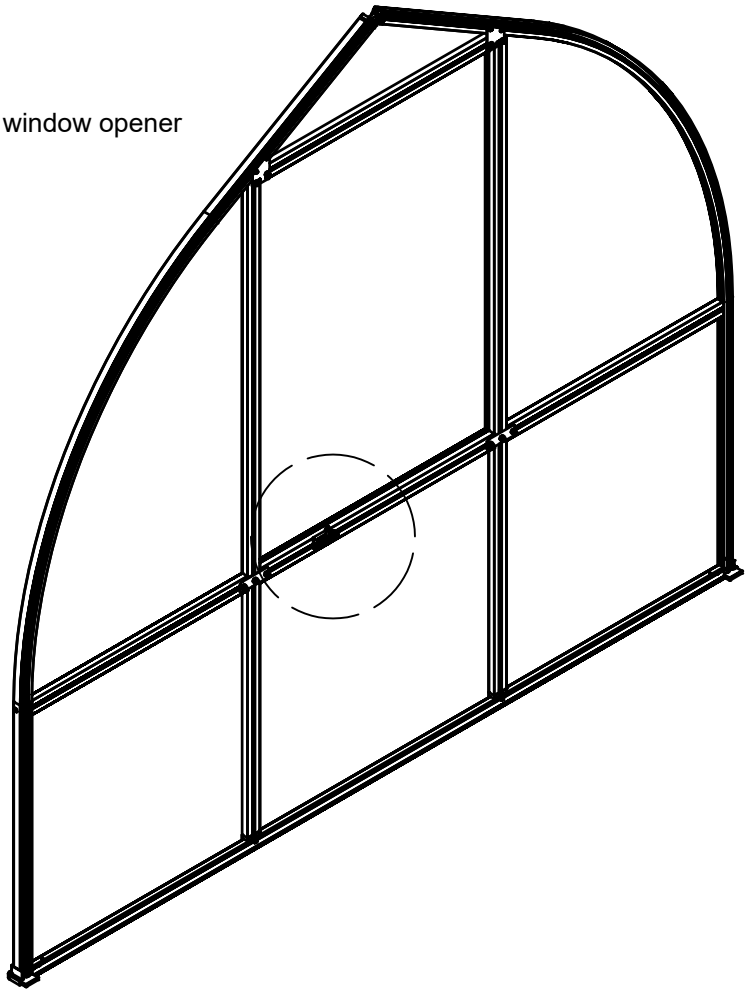


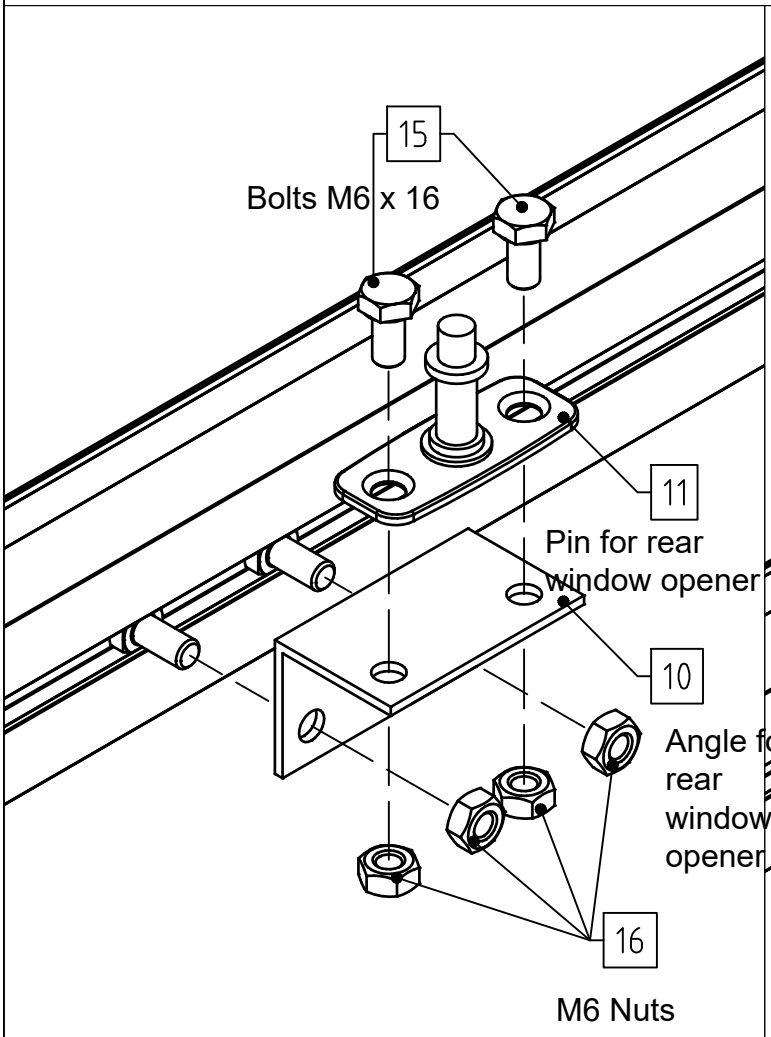
(Cross section)

RG-K

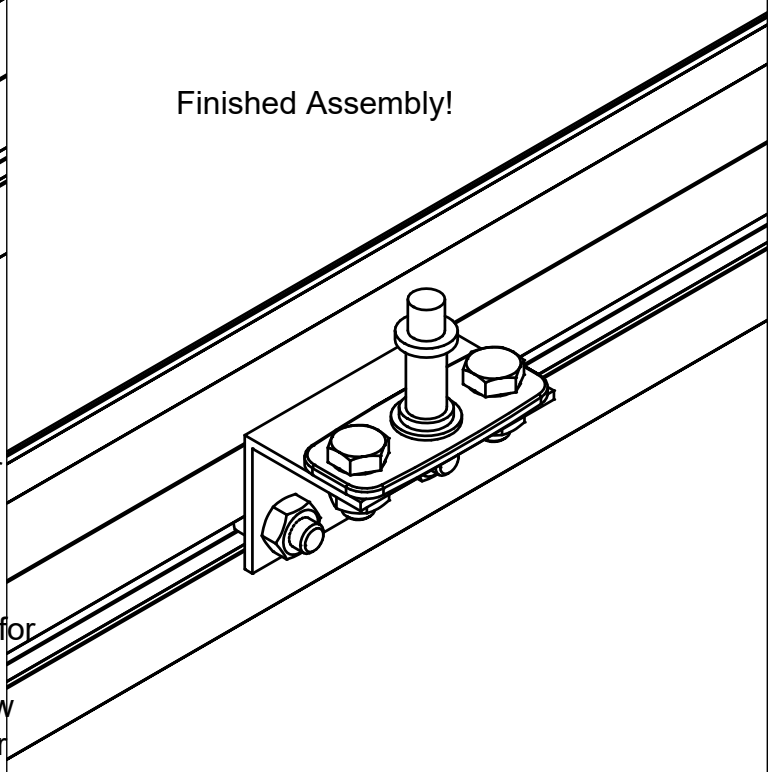
I Interior View

Installation of Pin for rear window opener



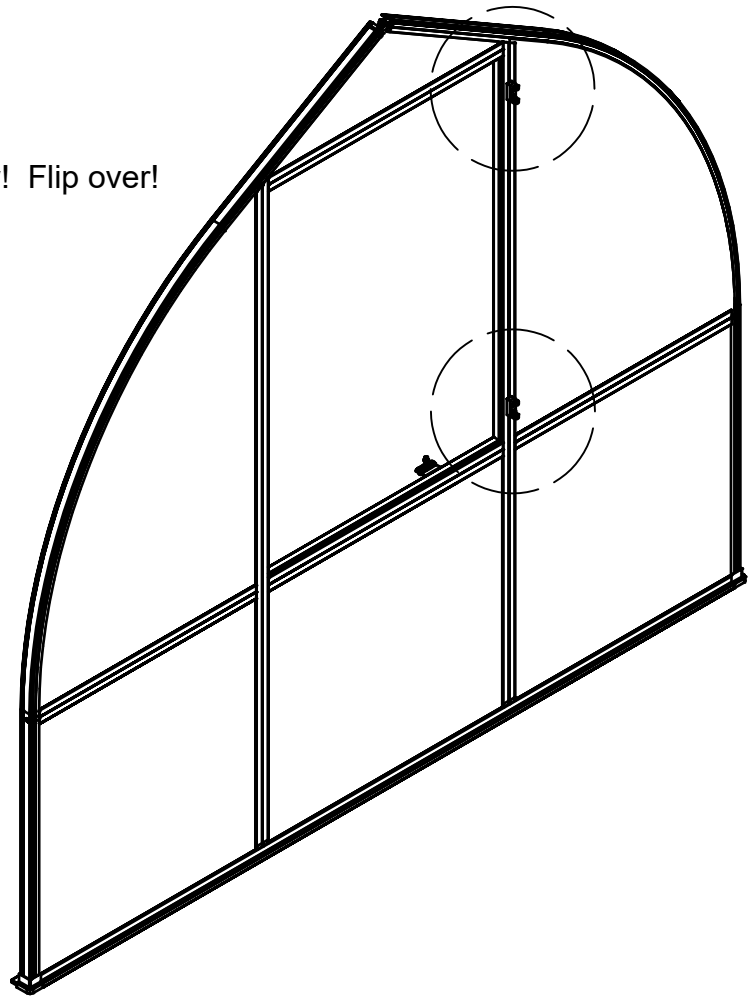


Finished Assembly!



A Exterior View

Reverse View! Flip over!



2x

(repeat for 2 hinges)

12 Hinge bracket

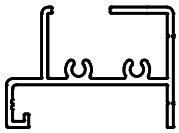
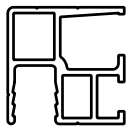
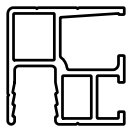
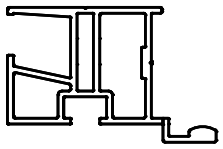
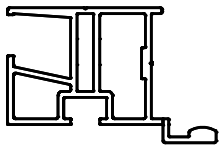
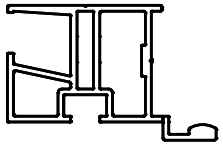
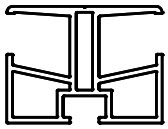
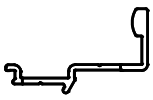
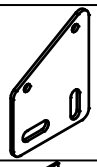
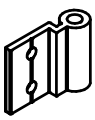
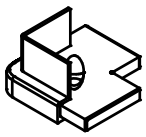
19 Countersunk screws 4.8 x 25mm

Finished assembly!

RG-M

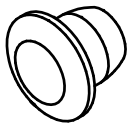
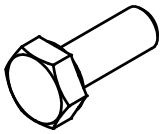
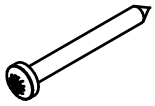
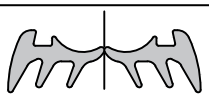
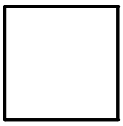
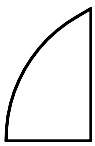
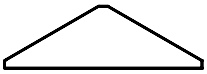
Front Gable Assembly with Door

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1		P063–12–01–00–04–1 P063–13–01–00–04–1	Soil/Floor Profile (Gable)	1	RIGA S: 2238 mm 88 1/8" RIGA L: 2874 mm 113 1/8"
2		P076–12–01–00–04–1 P076–14–01–00–04–1	Edge curve left (Gable) Note: this is a curved piece!	1	RIGA S: 2629 mm 103 1/2" RIGA L: 2996 mm 117 15/16"
3		P076–13–01–00–04–1 P076–15–01–00–04–1	Edge curve right (Gable) Note: this is a curved piece!	1	RIGA S: 2629 mm 103 1/2" RIGA L: 2996 mm 117 15/16"
4		P060–25–01–00–04–1 P060–27–01–00–04–1	Door Jamb Frame Left (from outside - lock side) note angle cut on the top	1	RIGA S: 1877 mm 73 7/8" RIGA L: 2067 mm 81 3/8"
5		P060–26–01–00–04–1 P060–28–01–00–04–1	Door Jamb Frame Right (from outside - hinge side) note angle cut on the top	1	RIGA S: 1877 mm 73 7/8" RIGA L: 2067 mm 81 3/8"
6		P060–18–01–00–04–1	Door Jamb Frame Top	1	758 mm 29 13/16"
7		P077–05–01–00–04–1 P077–01–01–00–04–1	Cross Bars (left and right of door)	2	RIGA S: 702 mm 27 5/8" RIGA L: 1020 mm 40 3/16"
8		P062–01–01–00–04–1	Door Jamb Bottom	1	762 mm 30"
9		9999000028	Angled connecting Plate	2	55 x 68.7mm 2 3/16" x 2 11.16"
10		9999000660	Strikeplate	1	
11		9999000716	Hinge	4	30 mm 1 3/16"
12		9999000003	Soil Profile Corner Connector (Black)	2	

Front Gable Assembly with Door

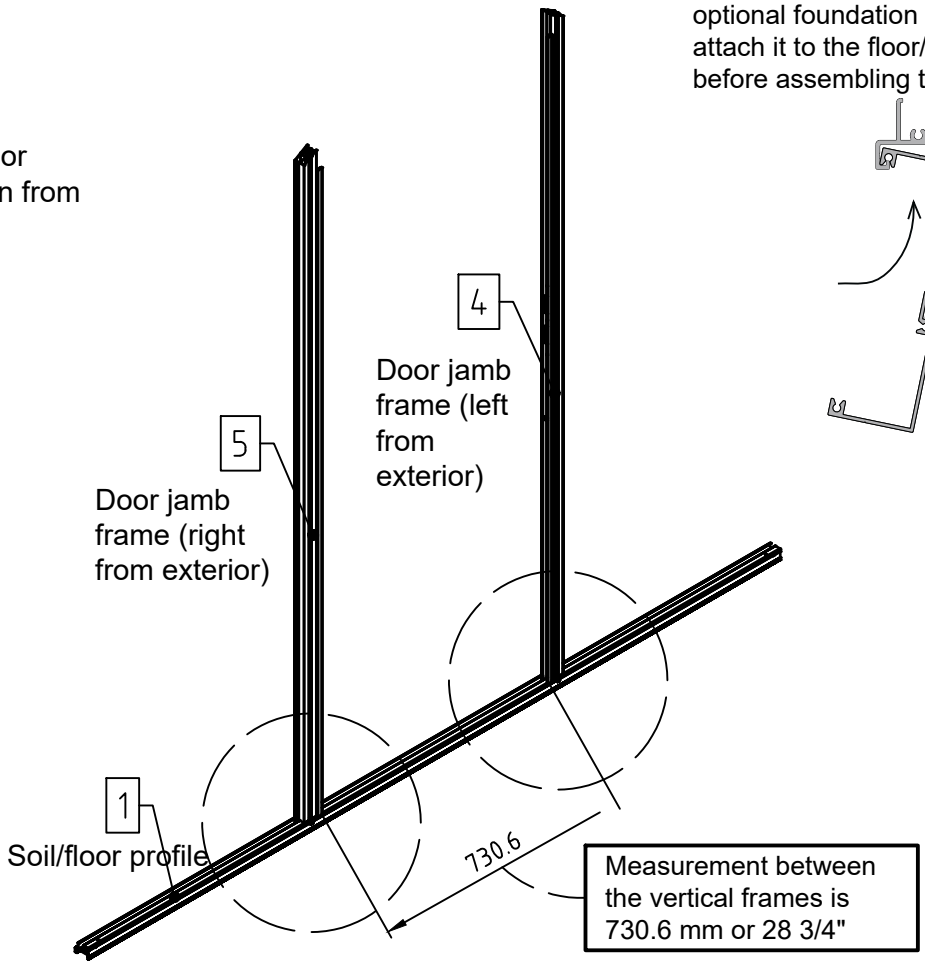
Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000097	Blind Plug (to cover drill holes on edge curves)	2	
14		9999000183	Bolt M6 x 16mm	4	DIN 933
15		9999000128	Nut M6	4	DIN 934
16		9999000144	Panhead Screw 4.2 x 13mm (attachments and connections, hinges)	14	DIN 7981
17		9999000150	Panhead Screw 4.8 x 45mm (to attach left and right crossbars)	4	DIN 7981
18		9999000204	Countersunk Screw 4.2 x 13mm (to attach strikeplate)	3	DIN 7982
19	 Pull apart to make 2 strands!	9999000119	Wedge Gasket 3-5mm Note: this is the thinner of the wedge gaskets!	3	RIGA S: 2x 712 mm 2x 28 1/16" RIGA L: 2x 1030 mm 2x 40 9/16"
20			Polycarbonate Panel (left and right lower)	2	RIGA S: 730 x 728 mm 28 3/4" x 28 11/16" RIGA L: 1048 x 728 mm 41 1/4" x 28 11/16"
21			Polycarbonate Panel (left and right upper)	2	RIGA S: 730 x 1135 mm 28 3/4"x44 11/16" RIGA L. 1048 x 1319 mm 41 1/4" x 51 15/16"
22			Polycarbonate Panel (Gable Triangle) 762 x 239 mm 30" x 9 7/16"	1	CAREFUL!!! Front gable triangle and rear gable triangle are different!!!
23					
24					

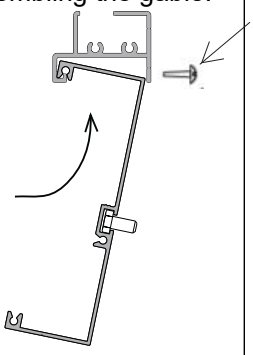
Interior View

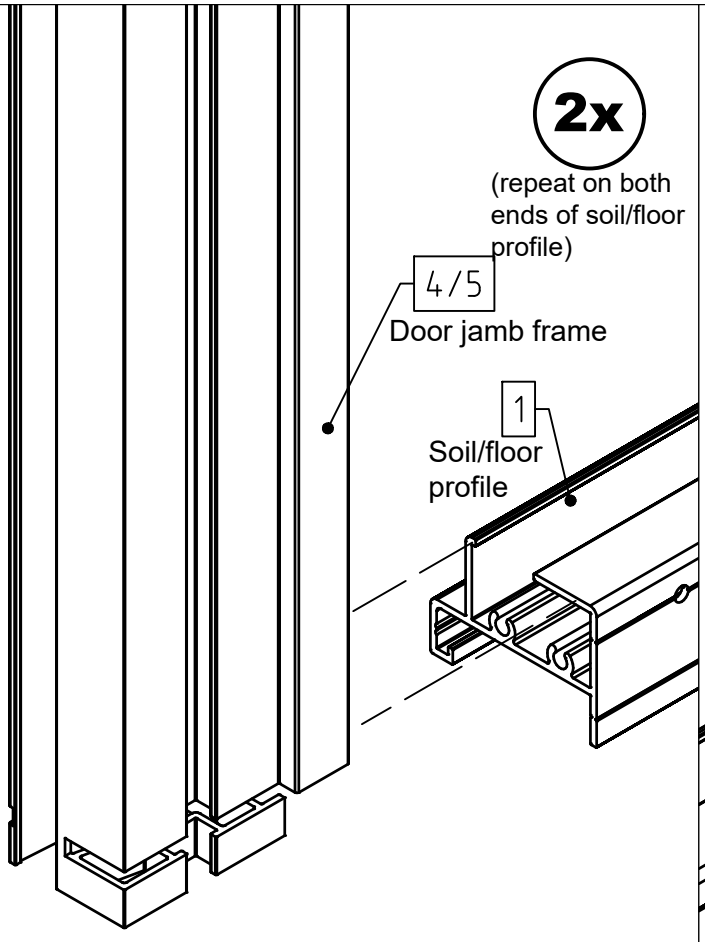
Note: The angled tips of the door jamb frames should angle down from the center

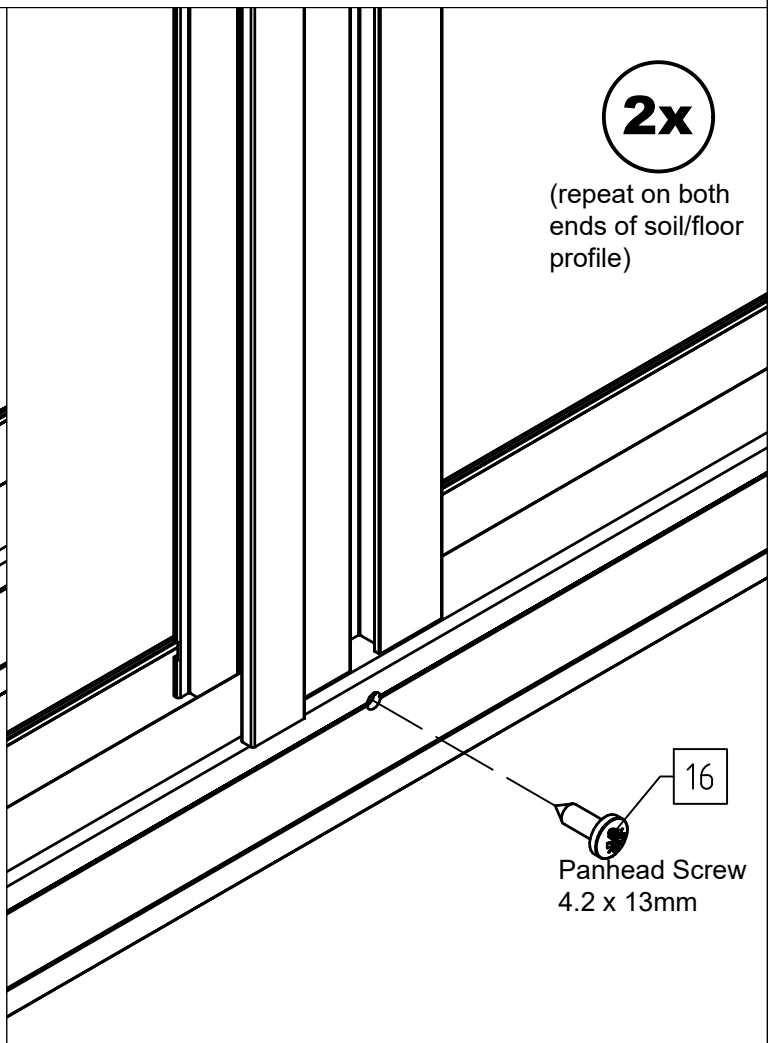
IMPORTANT! If you are placing your greenhouse on a 20" knee wall, you will need to open your "door lowering" or "door drop kit" now. You will find segmented pieces of the soil/floor profiles AND you will use the 20" longer door jamb frames your find in that kit! Please go to our YouTube playlist for assembly videos.



Important! If you are using the optional foundation frame - attach it to the floor/soil profile before assembling the gable!



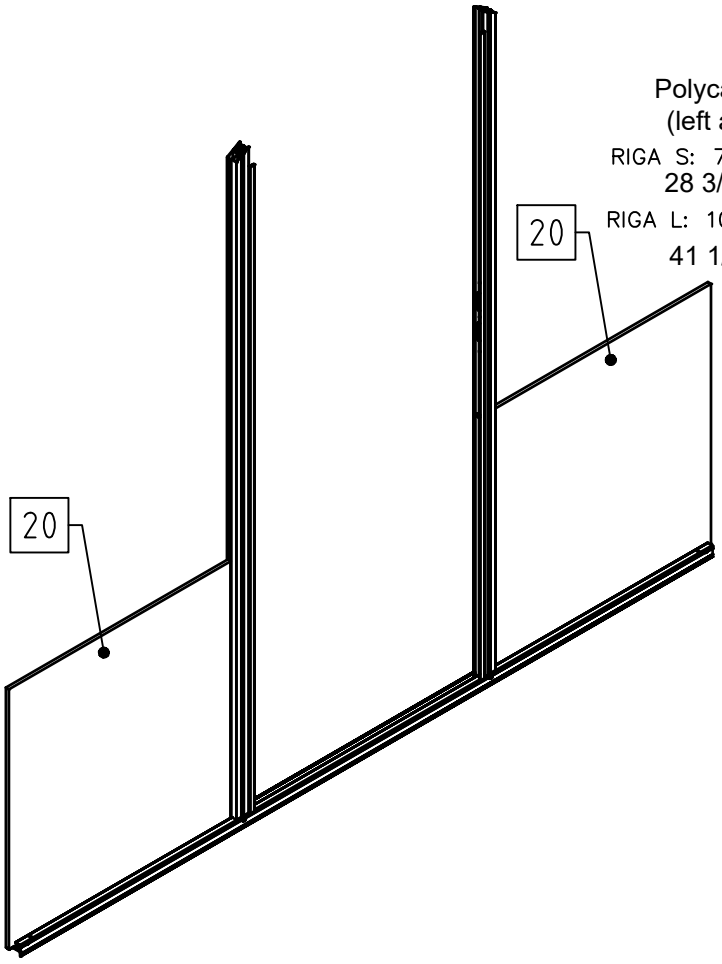




I Interior View

Polycarbonate Panels
(left and right lower)
RIGA S: 730 x 728 mm
28 3/4" x 28 11/16"
RIGA L: 1048 x 728 mm
41 1/4" x 28 11/16"

20



Polycarbonate Panels
(left and right lower)
RIGA S: 730 x 728 mm
28 3/4" x 28 11/16"
RIGA L: 1048 x 728 mm
41 1/4" x 28 11/16"

20

(repeat on both sides)

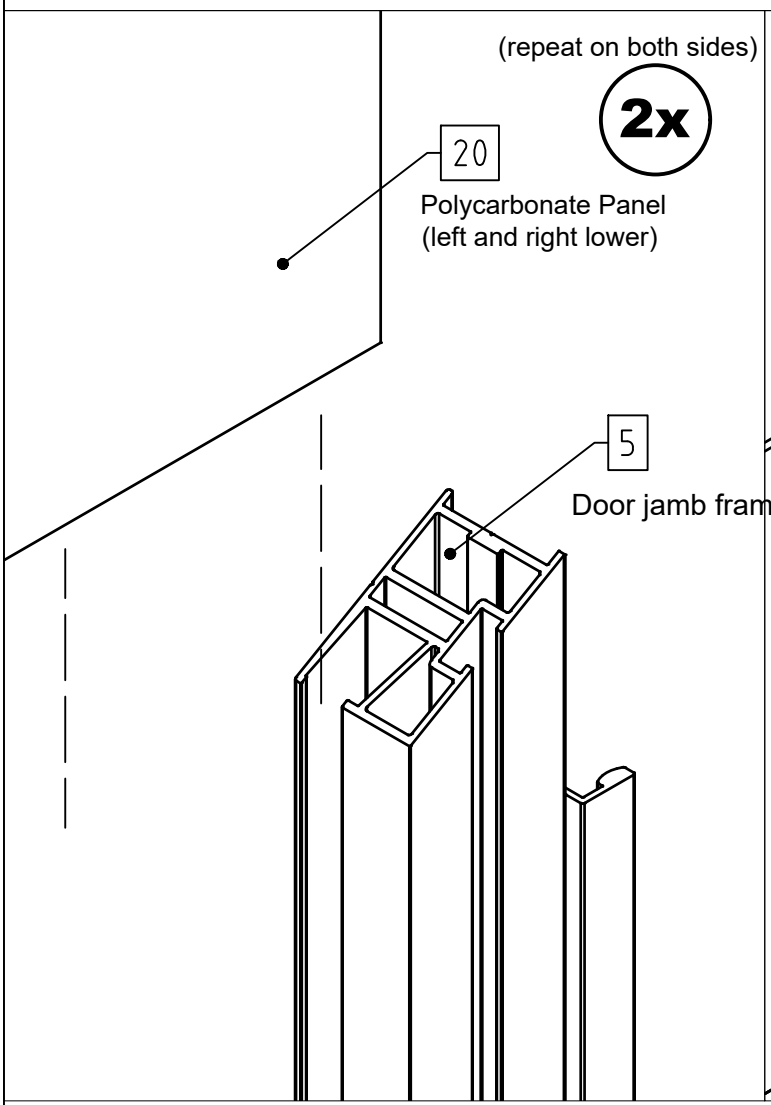
2x

20

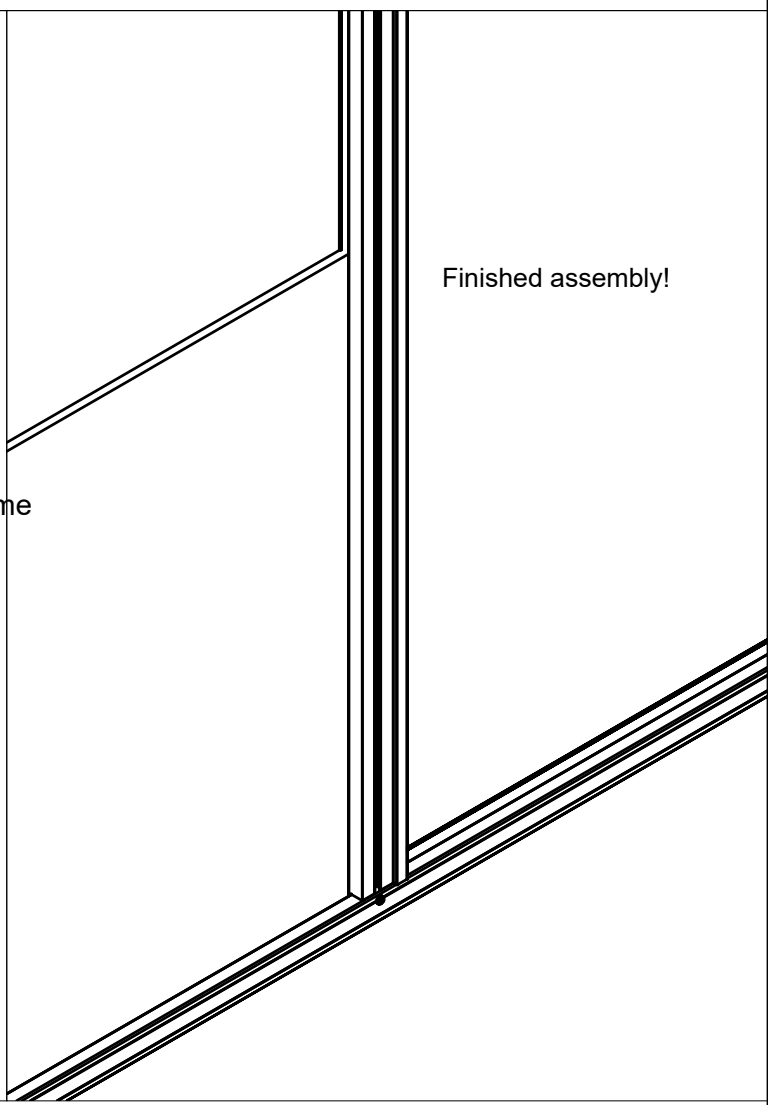
Polycarbonate Panel
(left and right lower)

5

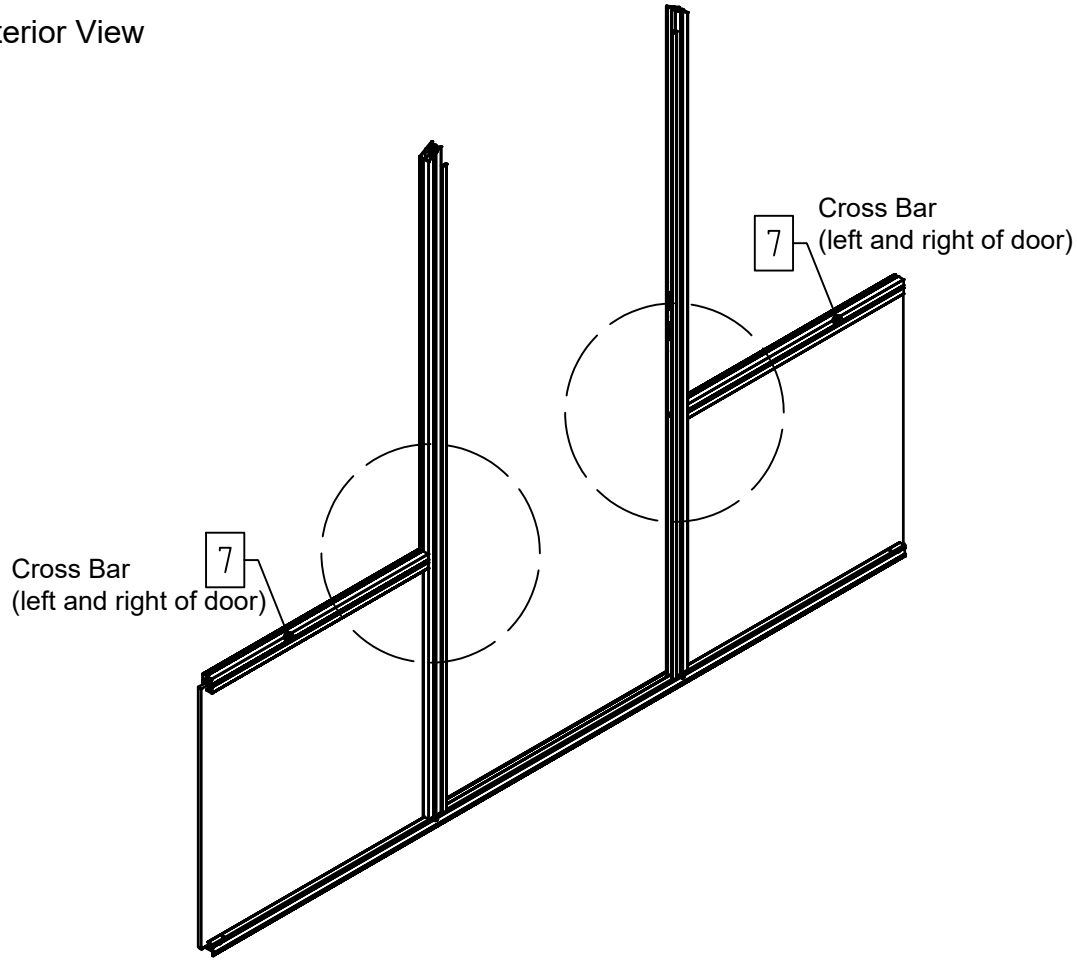
Door jamb frame



Finished assembly!

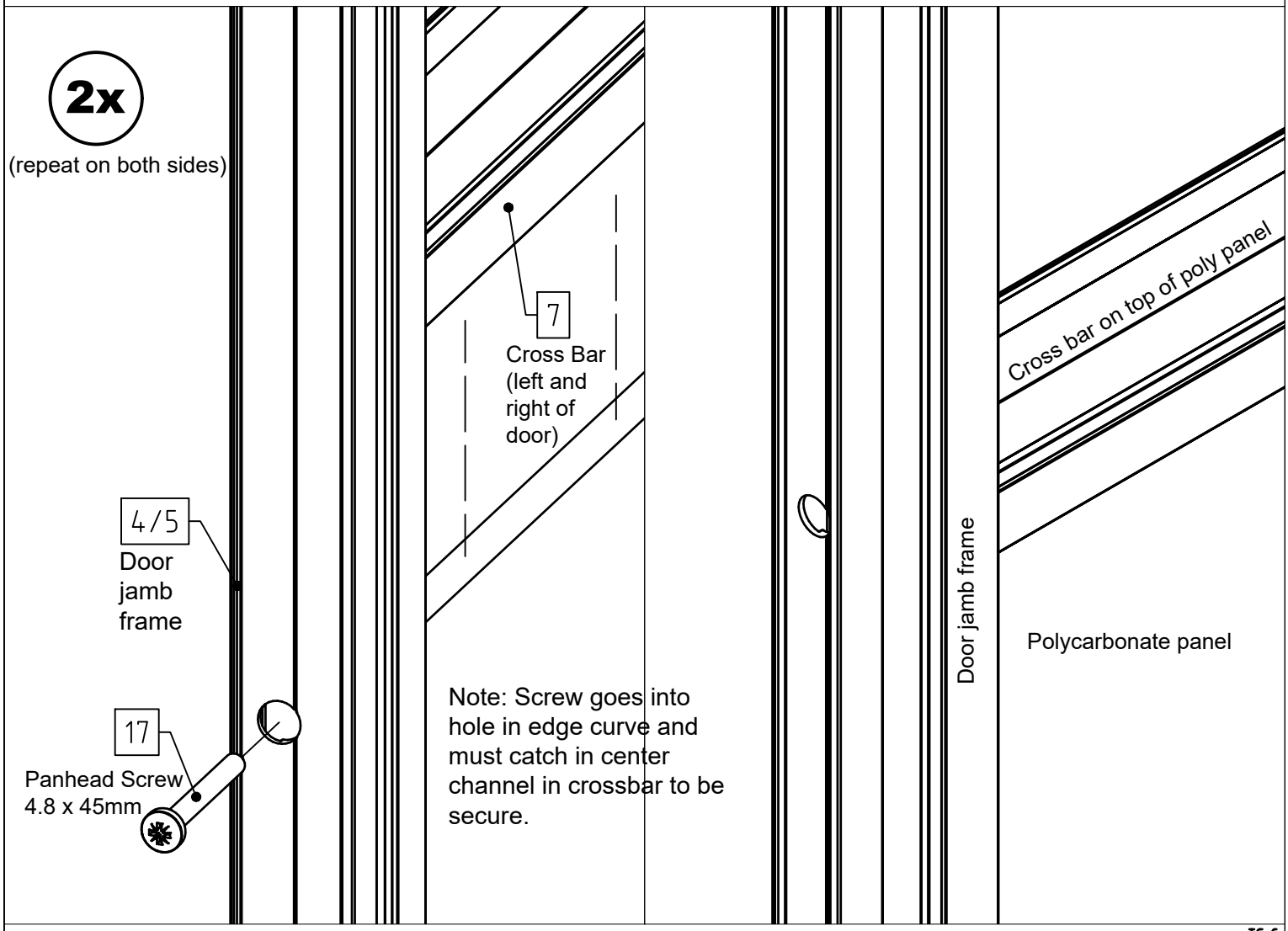


Interior View



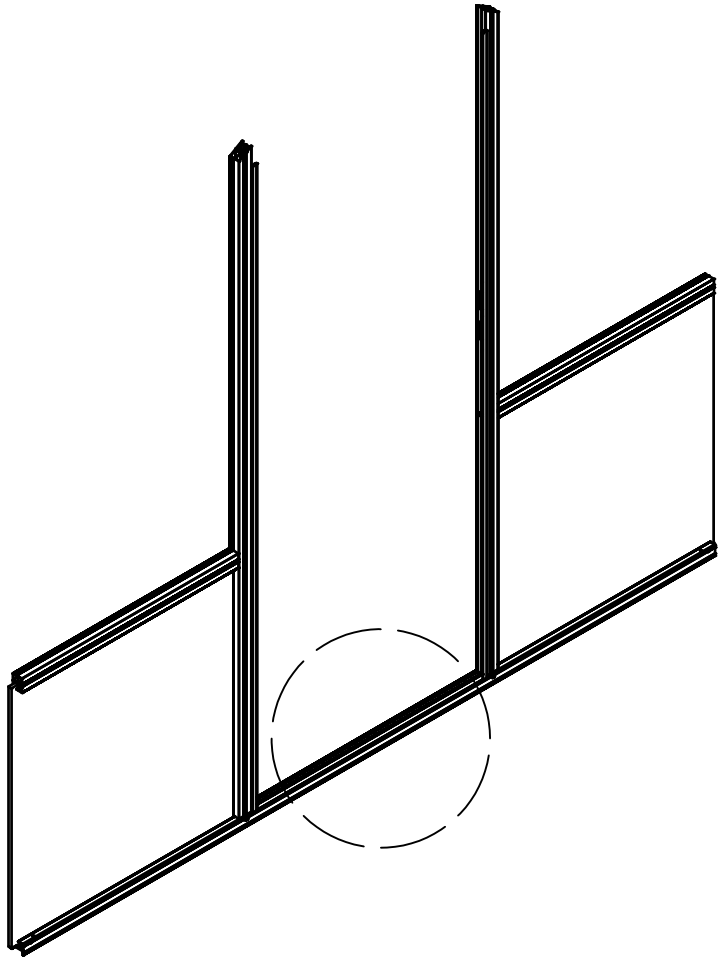
2x

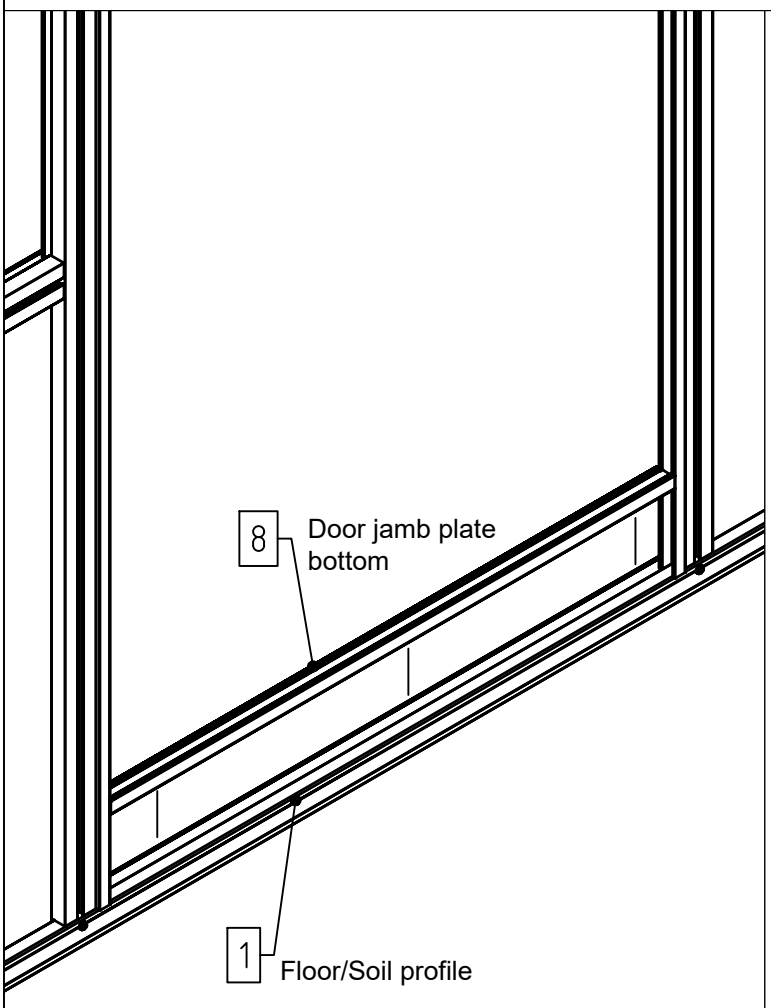
(repeat on both sides)

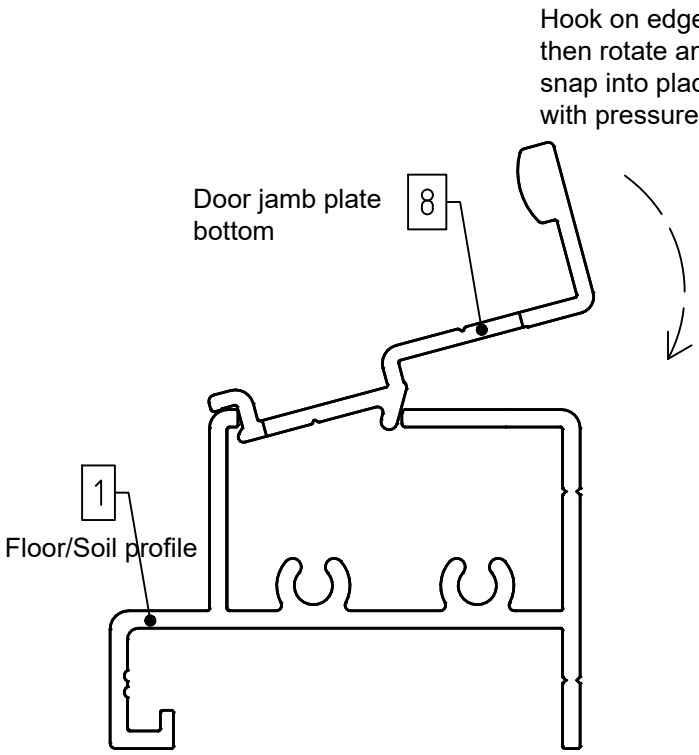


TG-C

I Interior View

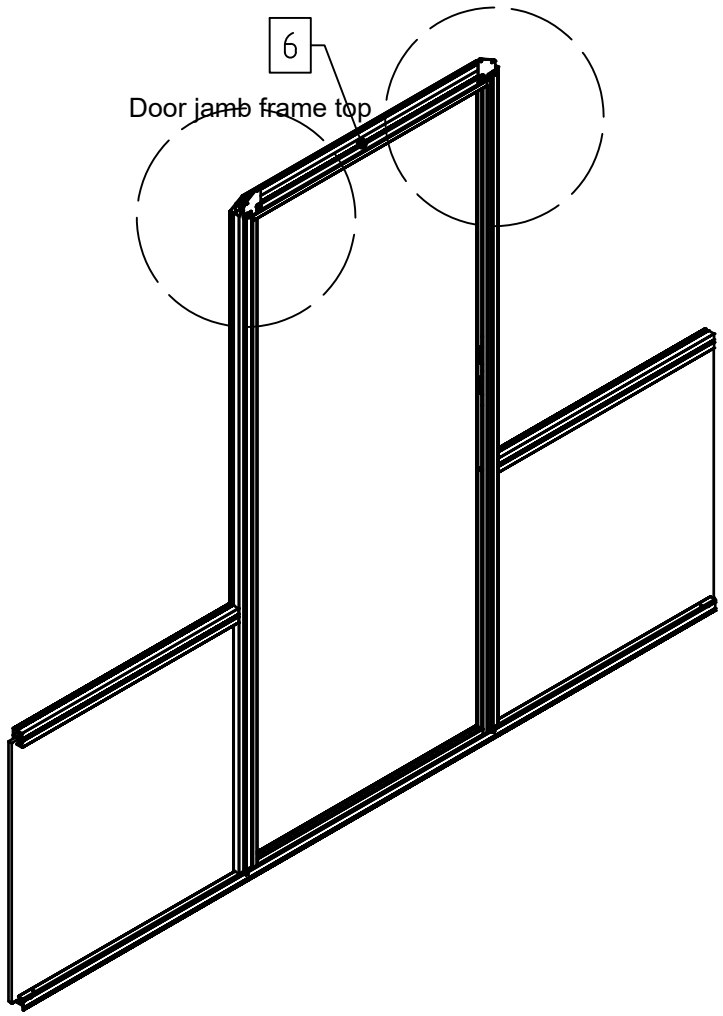


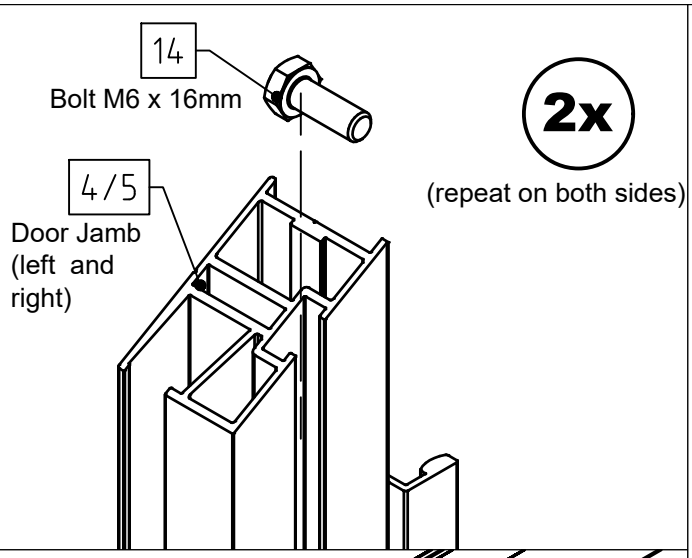




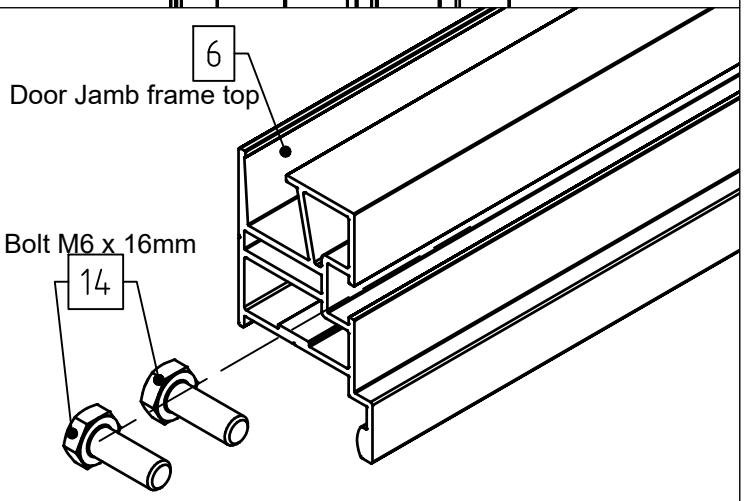
VD Simplified View

Interior View

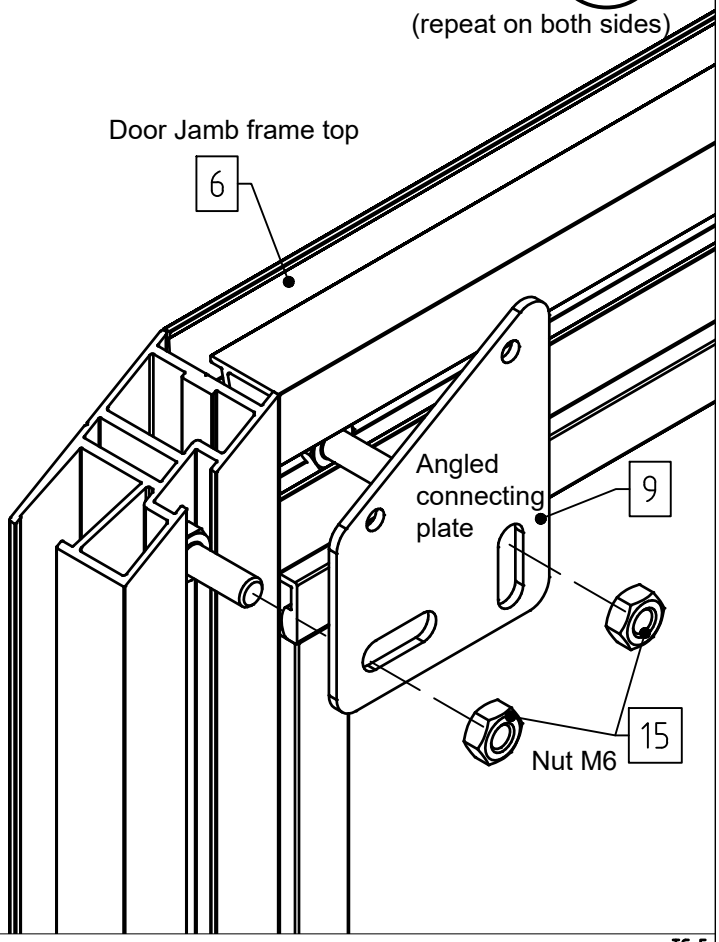


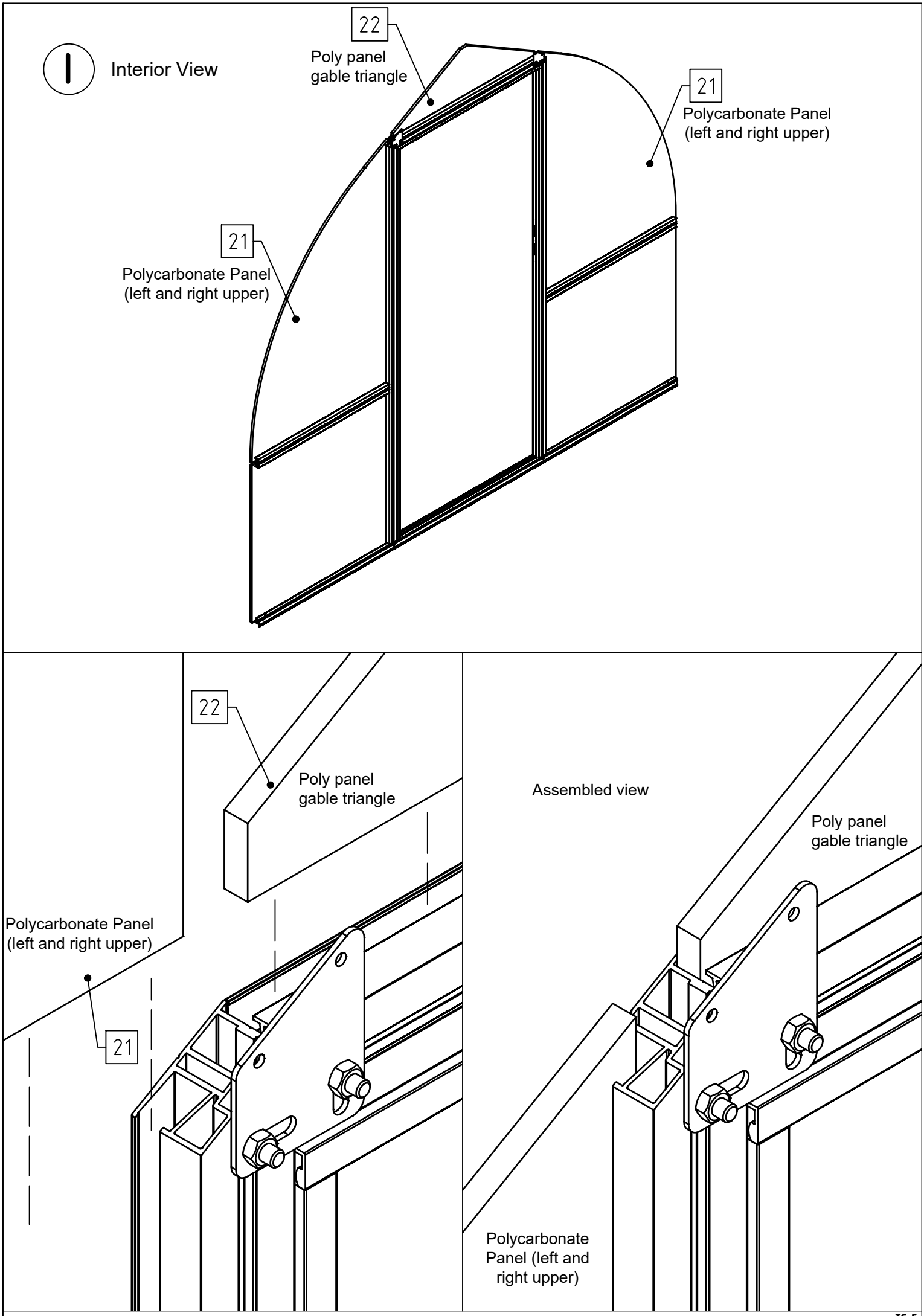


2x
(repeat on both sides)

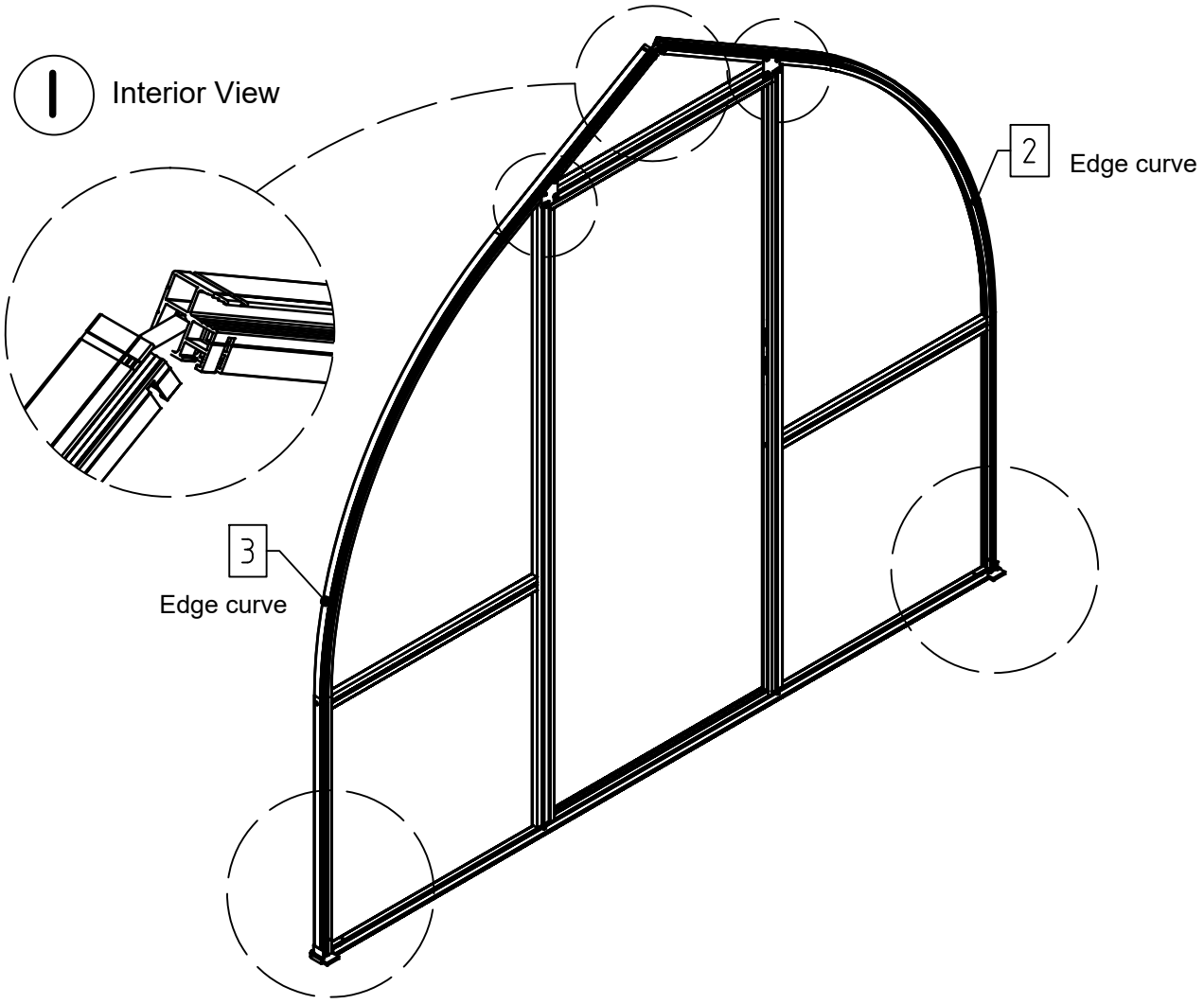


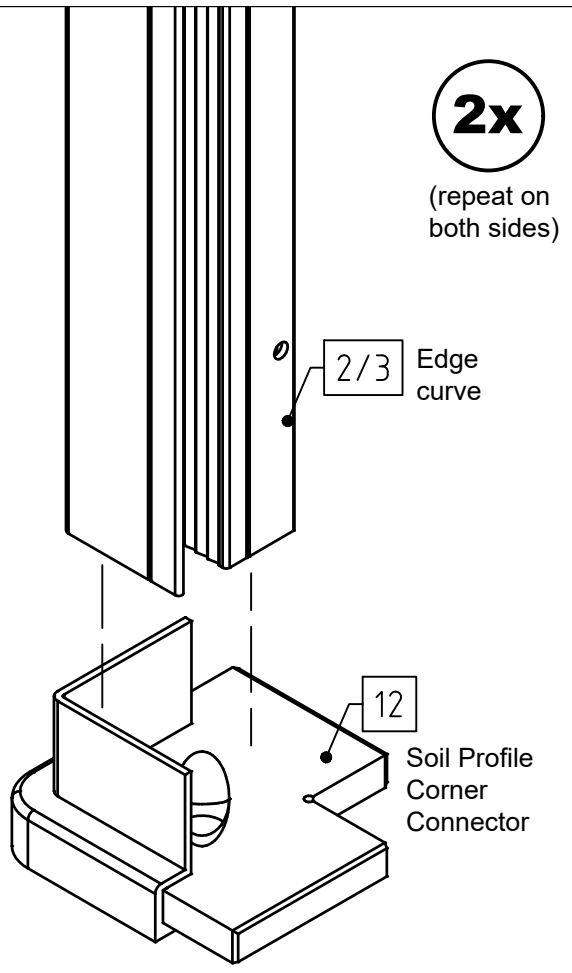
2x
(repeat on both sides)

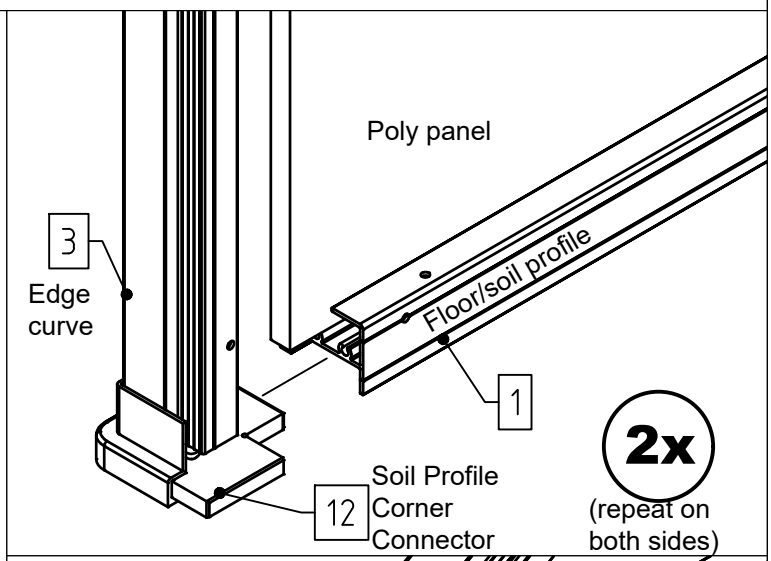


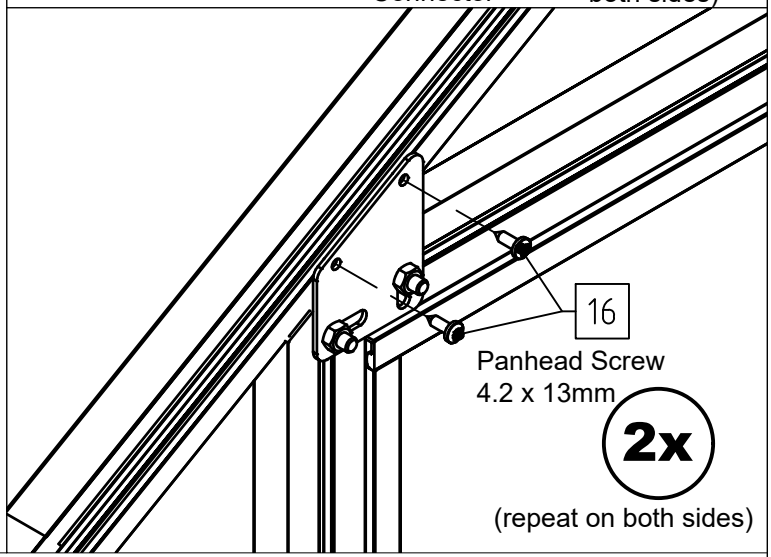

Interior View
22
Poly panel
gable triangle
21
Polycarbonate Panel
(left and right upper)
21
Polycarbonate Panel
(left and right upper)
22
Poly panel
gable triangle
Polycarbonate Panel
(left and right upper)
21
Assembled view
Poly panel
gable triangle
Polycarbonate
Panel (left and
right upper)

TG-F

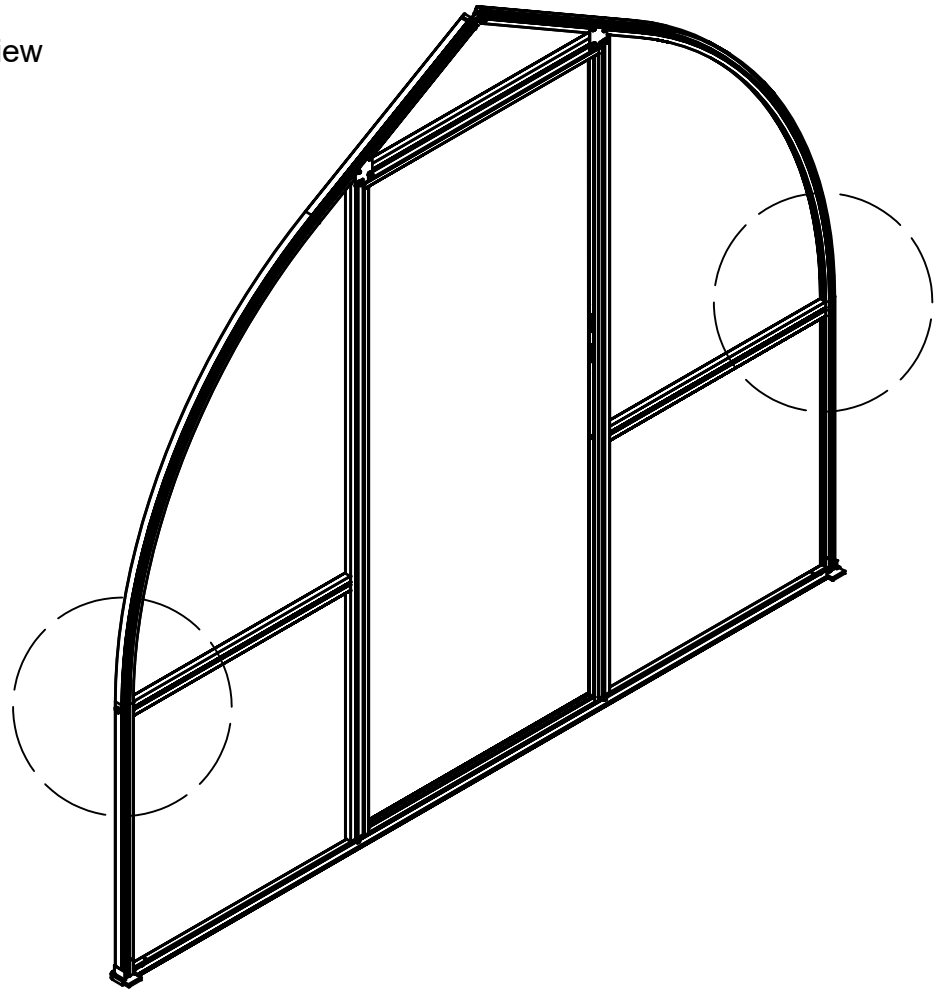

Interior View
2
Edge curve
3
Edge curve


2x
(repeat on
both sides)
2/3
Edge
curve
12
Soil Profile
Corner
Connector


Poly panel
3
Edge
curve
Floor/soil profile
1
12
Soil Profile
Corner
Connector
2x
(repeat on
both sides)


16
Panhead Screw
4.2 x 13mm
2x
(repeat on both sides)

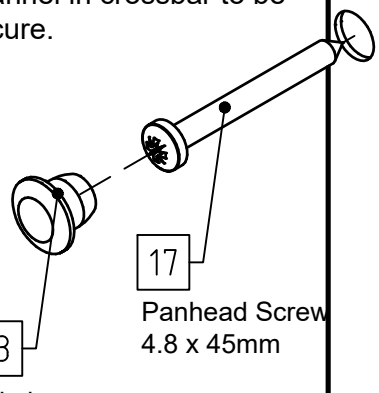
1 Interior View



2x

(repeat on both sides)

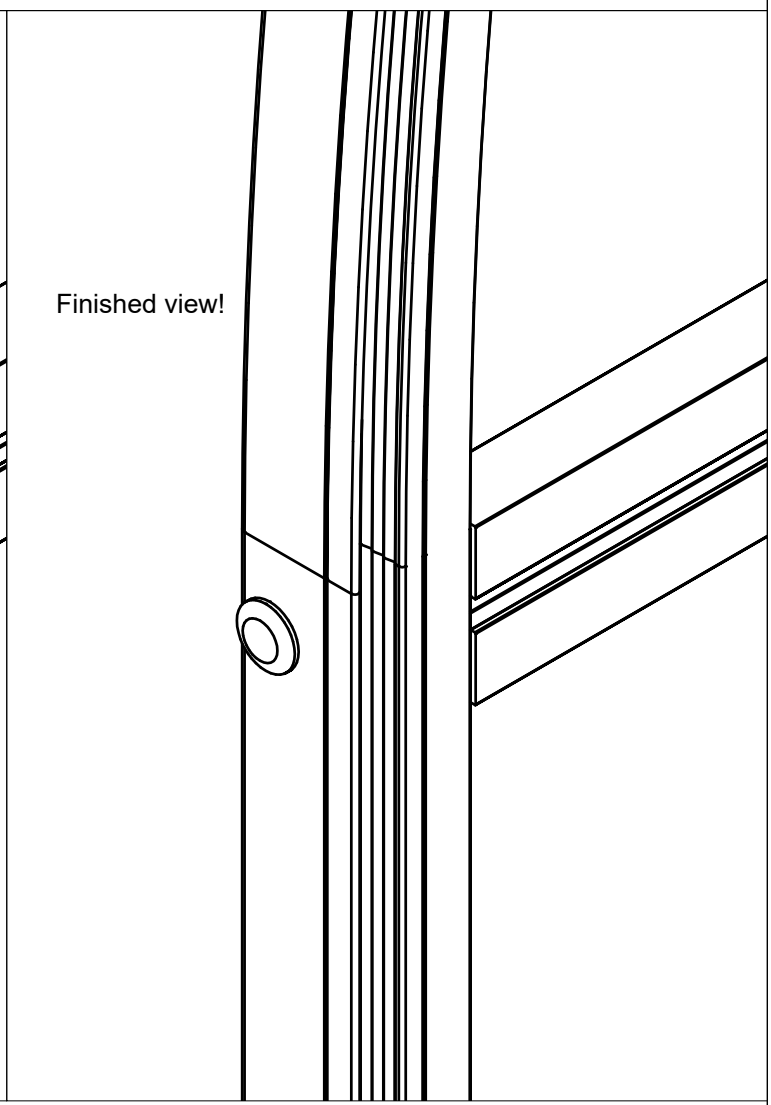
Note: Screw goes into hole in edge curve and must catch in center channel in crossbar to be secure.



17 Panhead Screw 4.8 x 45mm

13 Blind plug to cap hole

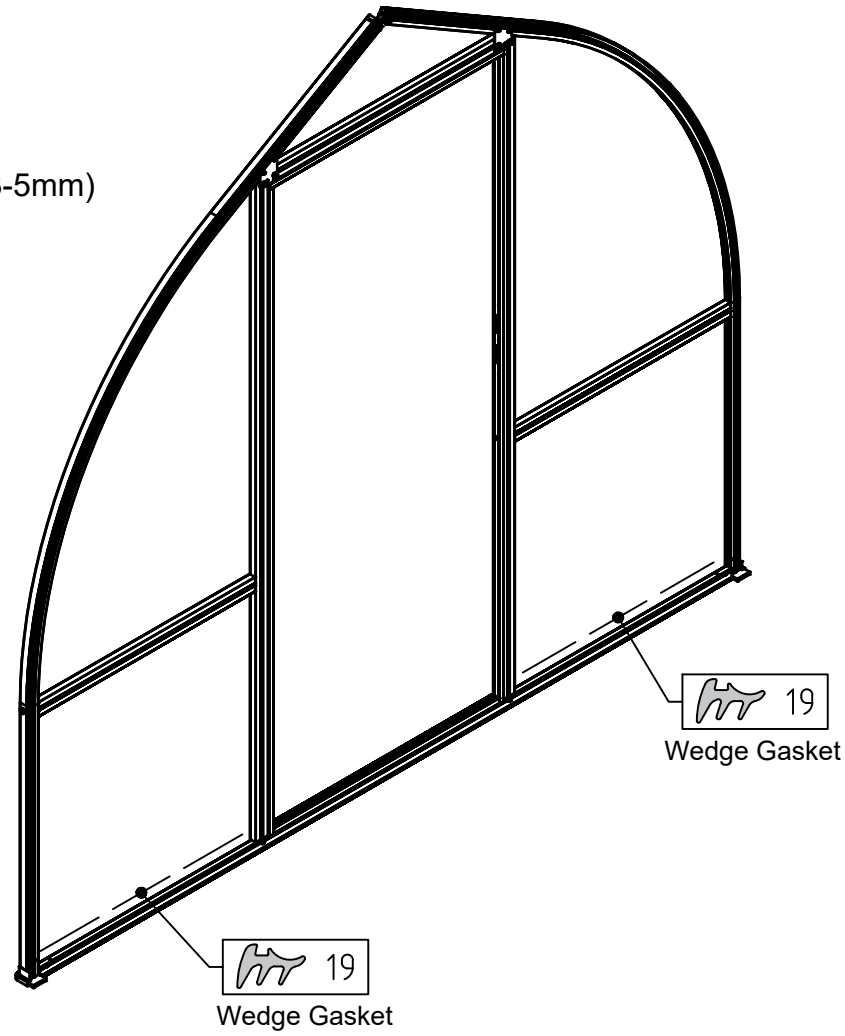
Finished view!



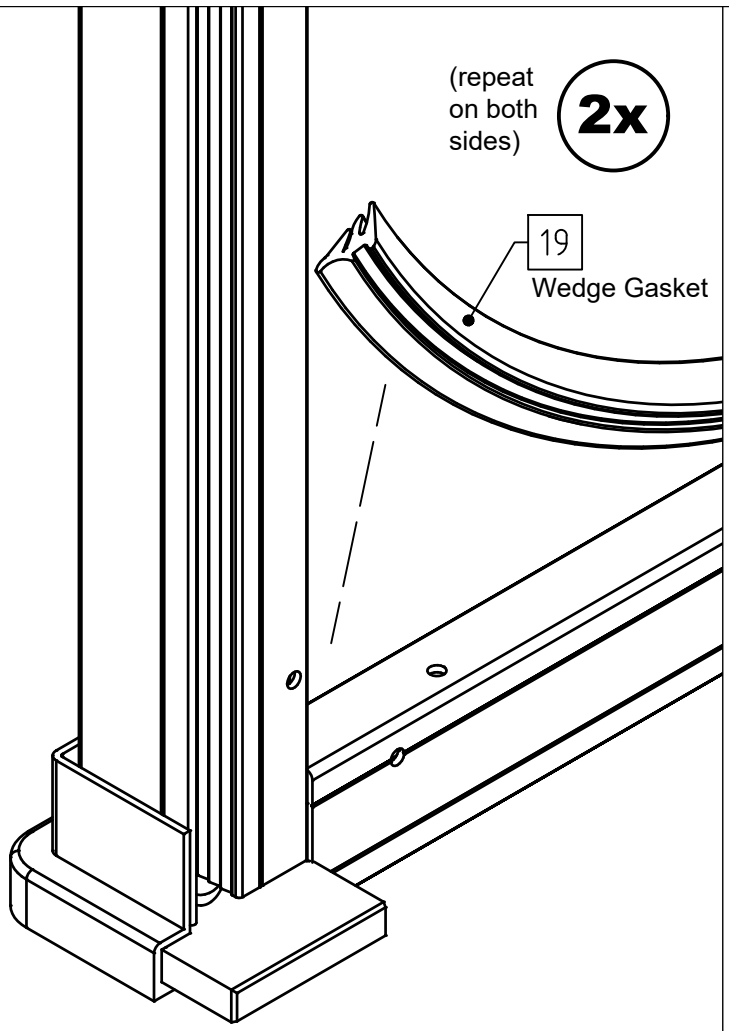
I Interior View

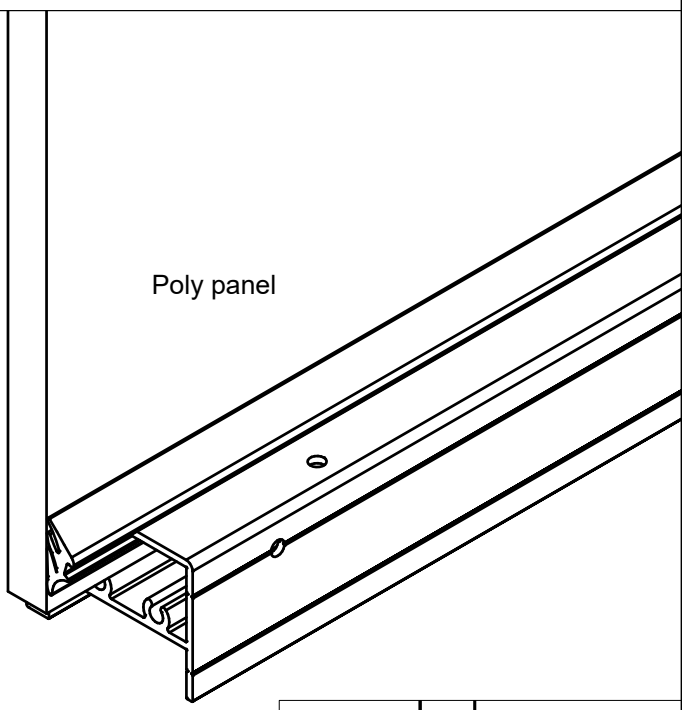
Wedge Gasket (3-5mm)

Note: The gasket can shrink over a long period. It is recommended to have the wedge gasket slightly longer and compress it together as you push it in.



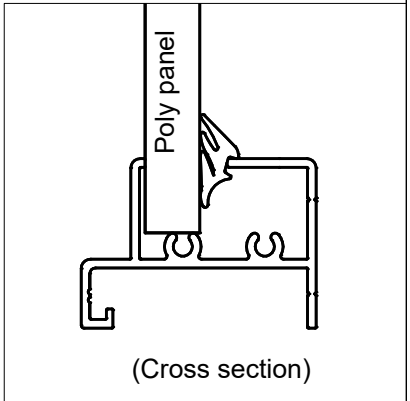
(repeat on both sides) 2x



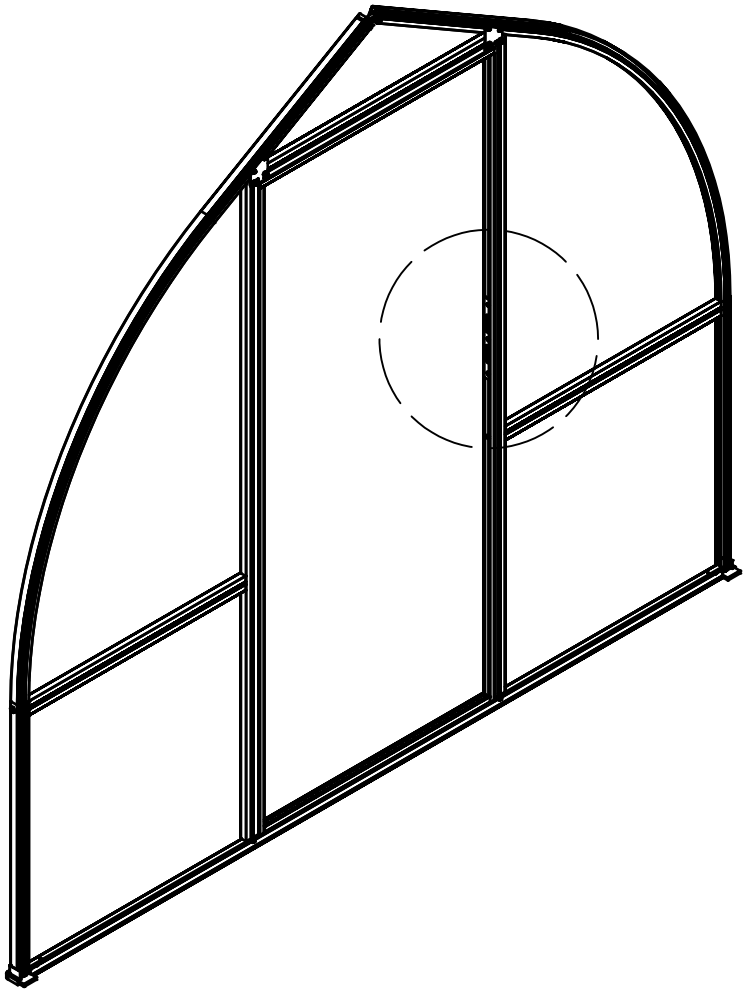


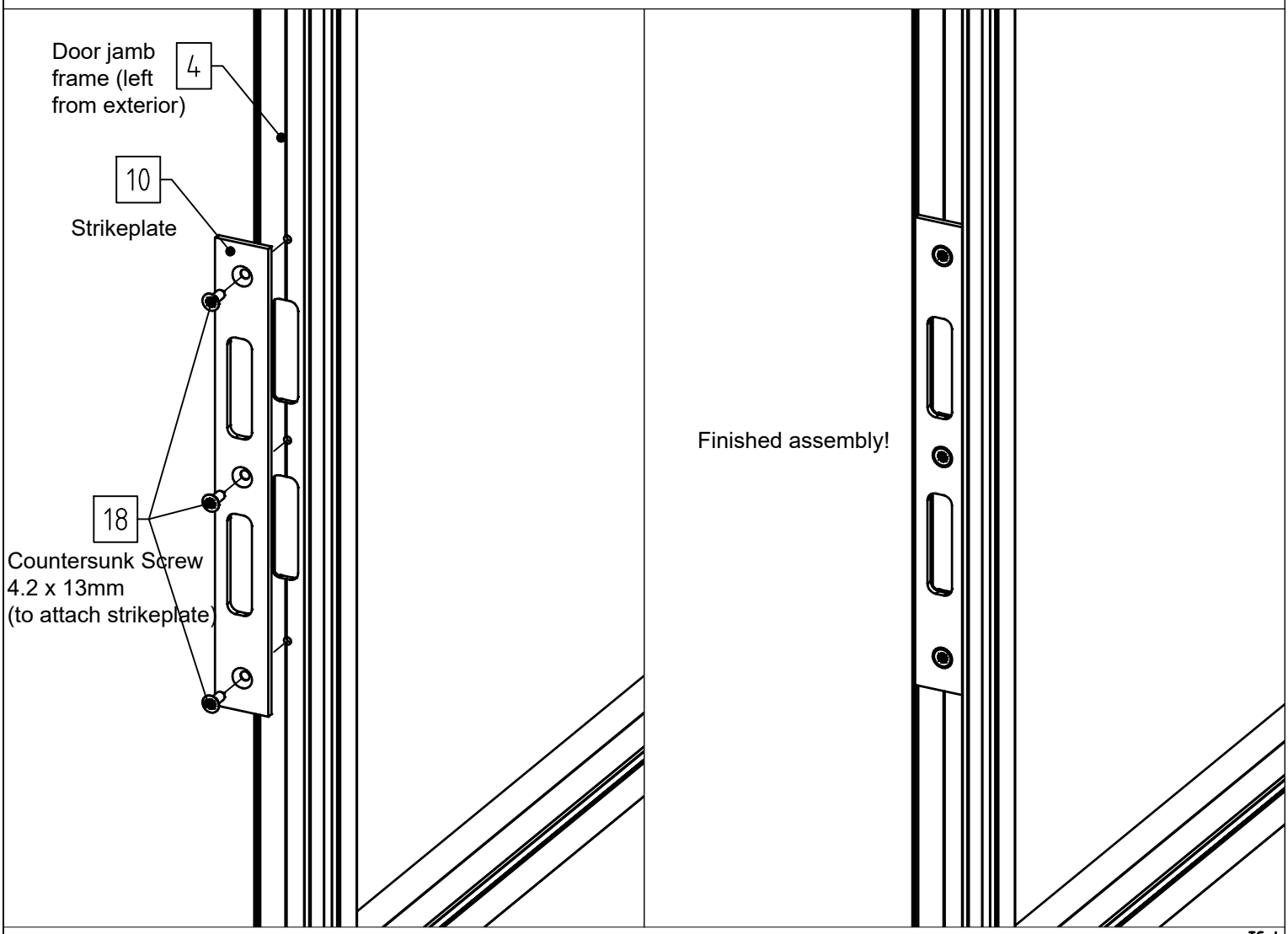
Note:Look closely at orientation of wedge gasket

VD Simplified View



Interior View



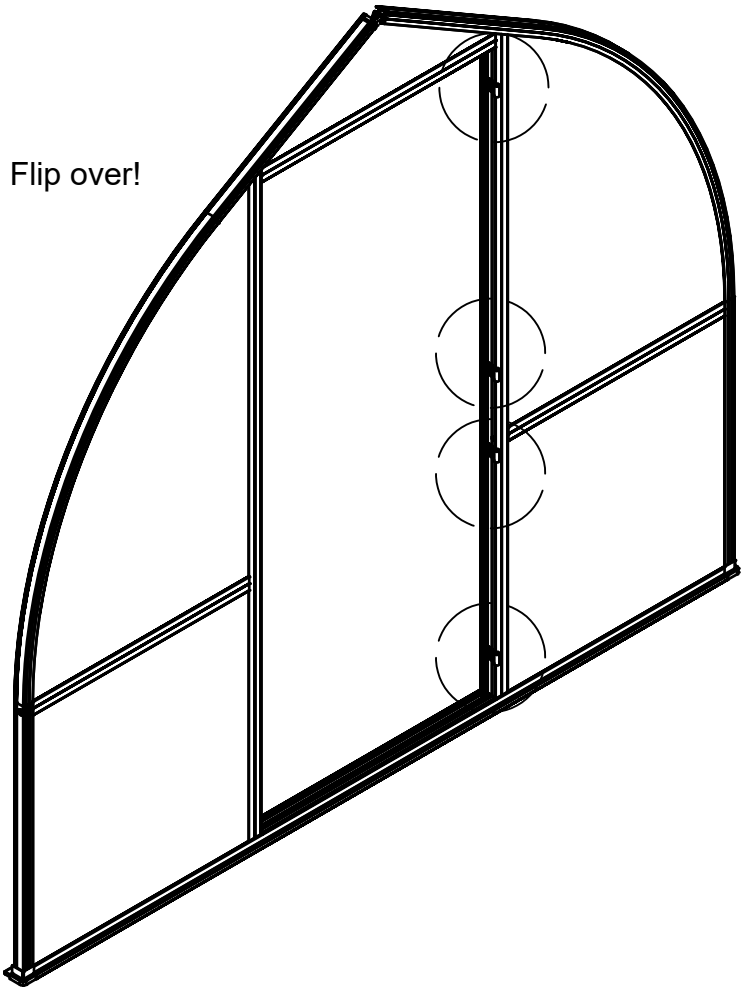


TG-J

A Exterior View

Reverse View! Flip over!

Add the Hinge Plates



4x

(repeat for all hinges)

5

Door jamb frame (right from exterior)

11

Hinge

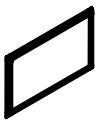
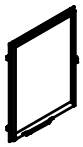
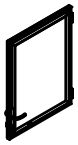
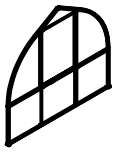
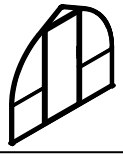
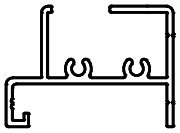
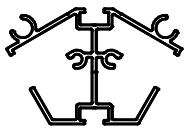
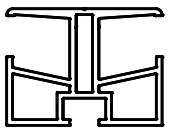
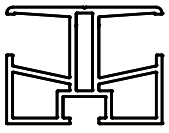
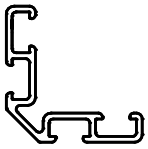
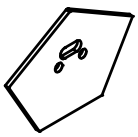
16

Panhead Screw 4.2 x 13mm

Finished assembly!

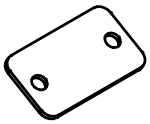
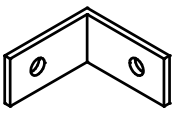
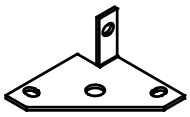
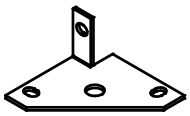
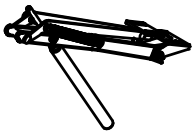
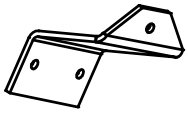
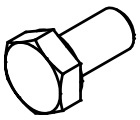
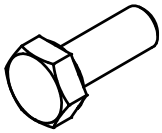
Side Wall Assembly

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
1			Assembled Roof Window	Typ II: 1 Typ III: 1 Typ IV: 2 Typ V: 4	
2			Assembled Rear Gable Window	1	
3			Assembled Upper Door	1	
4			Assembled Lower Door	1	
5			Assembled Rear Gable	1	
6			Assembled Front Gable	1	
7		P063–14–01–00–04–1 P063–15–01–00–04–1 P063–16–01–00–04–1 P063–17–01–00–04–1	Soil/Floor Profile (Eaves)	2	II: 2072 mm / 81 9/16" III: 3130 mm / 123 1/4" IV: 4188 mm / 164 7/8" V: 5246 mm / 206 9/16"
8		P079–02–01–00–04–1 P079–03–01–00–04–1 P079–01–01–00–04–1 P079–04–01–00–04–1	Ridge Beam	1	II: 2137 mm / 84 1/8" III: 3195 mm / 125 13/16" IV: 4253 mm / 167 7/16" V: 5311 mm / 209 1/8"
9		P110–01–01–00–04–1 P110–02–01–00–04–1	Curve/rib Profile (inner) This is a curved piece with black ends!	II: 2 III: 4 IV: 6 V: 8	RIGA S: 2577 mm 101 7/16" RIGA L: 2943 mm 115 7/8"
10		P077–01–01–00–04–1	Crossbar (for under roof window)	II: 1 III: 1 IV: 2 V: 4	1020 mm 40 3/16"
11		P098–08–01–00–04–1 P098–09–01–00–04–1 P098–03–01–00–04–1 P098–11–01–00–04–1	Lateral support for stabilization	4	II: 2104 mm / 82 13/16" III: 3162 mm / 124 1/2" IV: 4220 mn / 166 1/8" V: 5278 mm / 207 13/16"
12		9999000075	Ridge Plate	2	

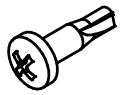
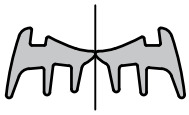
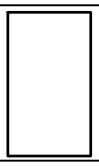
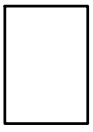
Side Wall Assembly

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
13		9999000031	Bracket (2 hole) (55 x 30 x 2) (2 3/16" x 1 3/16" x 1/16" (for window crossbars)	II: 2 III: 2 IV: 4 V: 8	
14		9999000072	Corner L bracket (to connect corners)	4	
15		9999001949	Inside corner plate (right)	2	
16		9999001948	Inside corner plate (left)	2	
17		25505700	Univent Roof Window Auto opener with piston	II: 1 III: 1 IV: 2 V: 4	
18		9999000023	Sash lock	II: 1 III: 1 IV: 2 V: 4	
19		9999000697	Bracket for magnetic door holder	1	
20		9999000638	Magnet for Door Holder	1	Ø25 mm 1"
21		9999000520	Hinge pin	4	90 mm 3 9/16"
22		9999000124	Bolt M6 x 12mm	1	DIN 933
23		9999000183	Bolt M6 x 16mm	II: 20 III: 20 IV: 28 V: 47	DIN 933
24		9999000128	Nut M6	II: 24 III: 24 IV: 31 V: 53	DIN 934

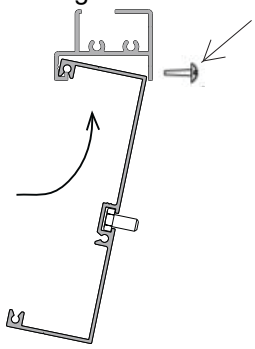
Side Wall Assembly

Packlist and Parts

Part #	Illustration	Mfr. Part Number	Description	Qty	Length/addt'l info
25		9999000144	Panhead screw 4.2 x 13mm (for plate and hardware attachment)	24	DIN 7981
26		9999000189	Self tapping Panhead screw 3.5 x 13mm (for magnet door holder)	2	DIN 7504
27		9999000136	Self tapping Panhead screw 3.5 x 16mm (for sash lock)	2	DIN 7504
28		9999000173	Washer A6.4 (attachment of lateral supports)	II: 20 III: 20 IV: 20 V: 24	DIN 9021
29		9999000120	Wedge Gasket 6-8mm (thickest) Double String - pull apart!	II: 7 III: 11 IV: 14 V: 16	1030 mm 40 9/16" Pull apart!
30		9999000229	Flat Window Gasket (for roof window opening)	II: 1 III: 1 IV: 2 V: 4	2,4 lfdm. 7'10" per window
31			Long sidewall polycarbonate panel (10mm)	II: 3 III: 5 IV: 6 V: 6	RIGA S: 1048 x 2634 mm 41 1/4" x 103 11/16" RIGA L: 1048 x 3000 mm 41 1/4" x 118 1/8"
32			Polycarbonate panel for under roof vent/ window (10mm)	II: 1 III: 1 IV: 2 V: 4	RIGA S: 1048 x 1984 mm 41 1/4" x 78 1/8" RIGA L: 1048 x 2345 mm 41 1/4" x 92 5/16"
33					
34					
35					
36					

Begin assembly of structure side walls

Important! If you are using the optional foundation frame - attach it to the floor/soil profile before assembling the sidewall!



5
Assembled Rear Gable

7
Soil/Floor Profile (eaves)

7
Soil/Floor Profile (eaves)

2x
(repeat at both corners)

Soil/Floor profile (eave) 7

5
Assembled rear gable

14
Coner L bracket

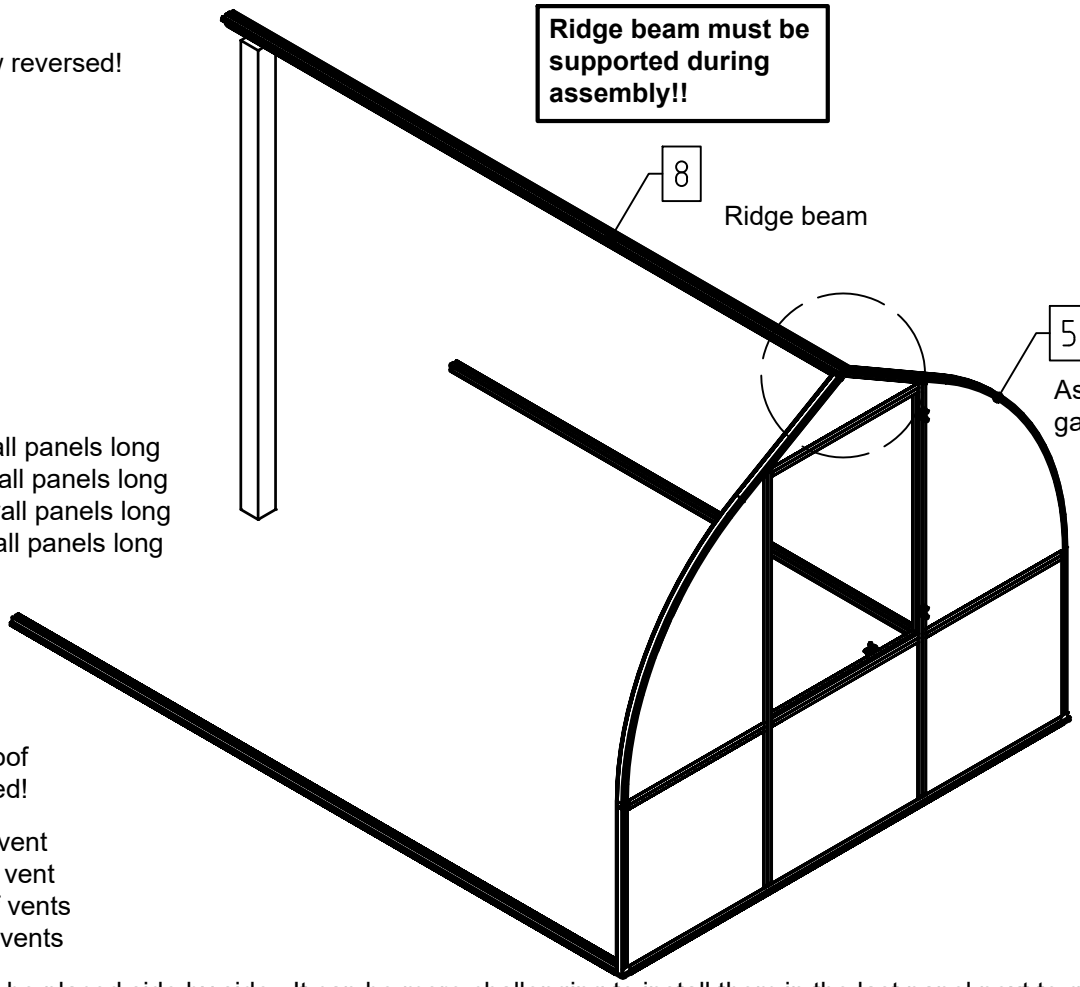
25
Panhead screw 4.2 x 13mm

Finished assembly!

ZS-A

View reversed!

Ridge beam must be supported during assembly!!



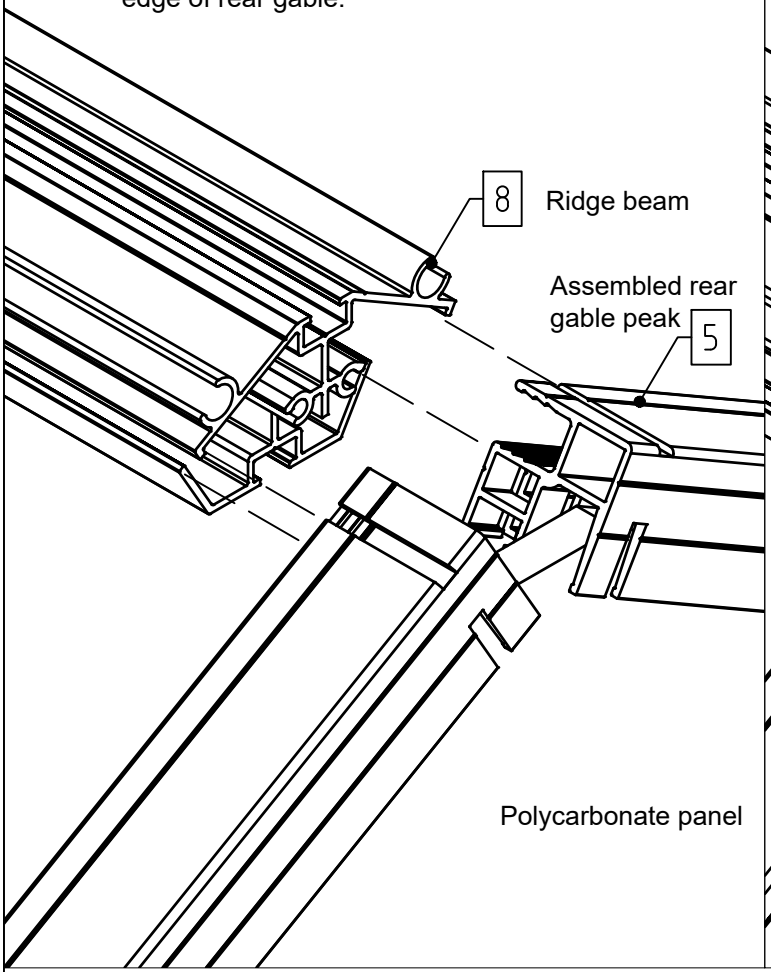
Type II is 2 sidewall panels long
Type III is 3 sidewall panels long
Type IV is 4 sidewall panels long
Type V is 5 sidewall panels long

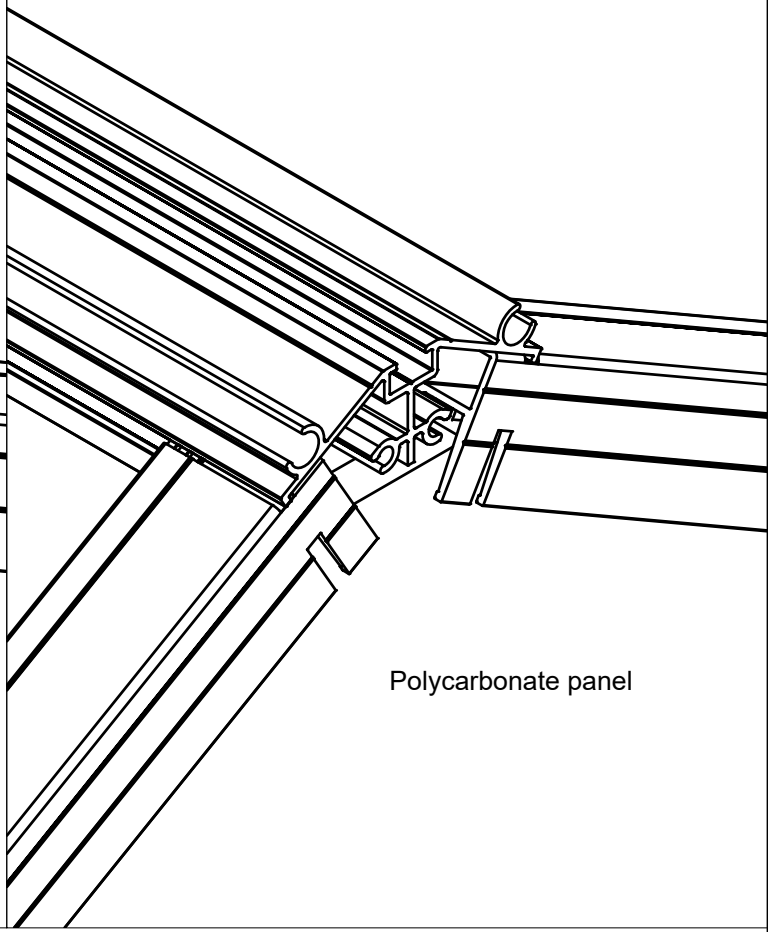
Plan where your roof vents will be located!

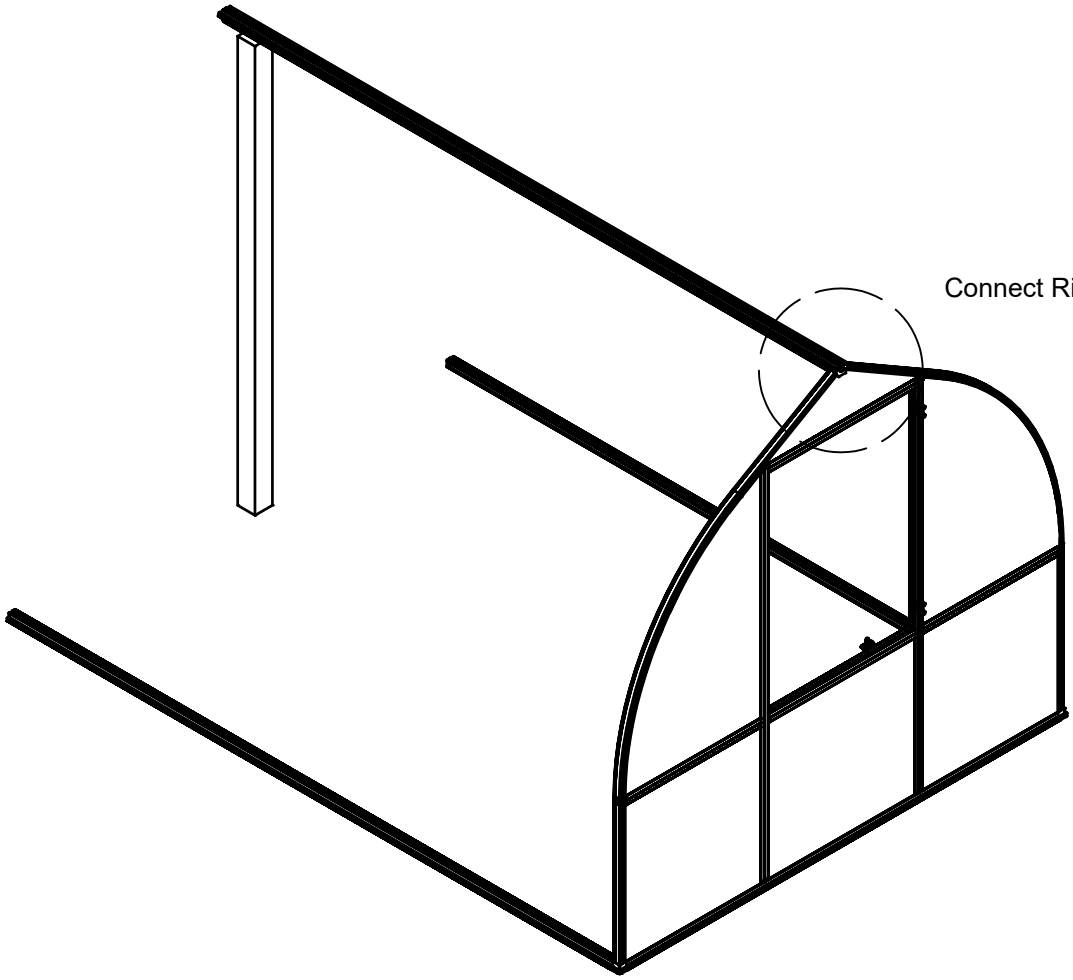
Type II has 1 roof vent
Type III has 1 roof vent
Type IV has 2 roof vents
Type V has 4 roof vents

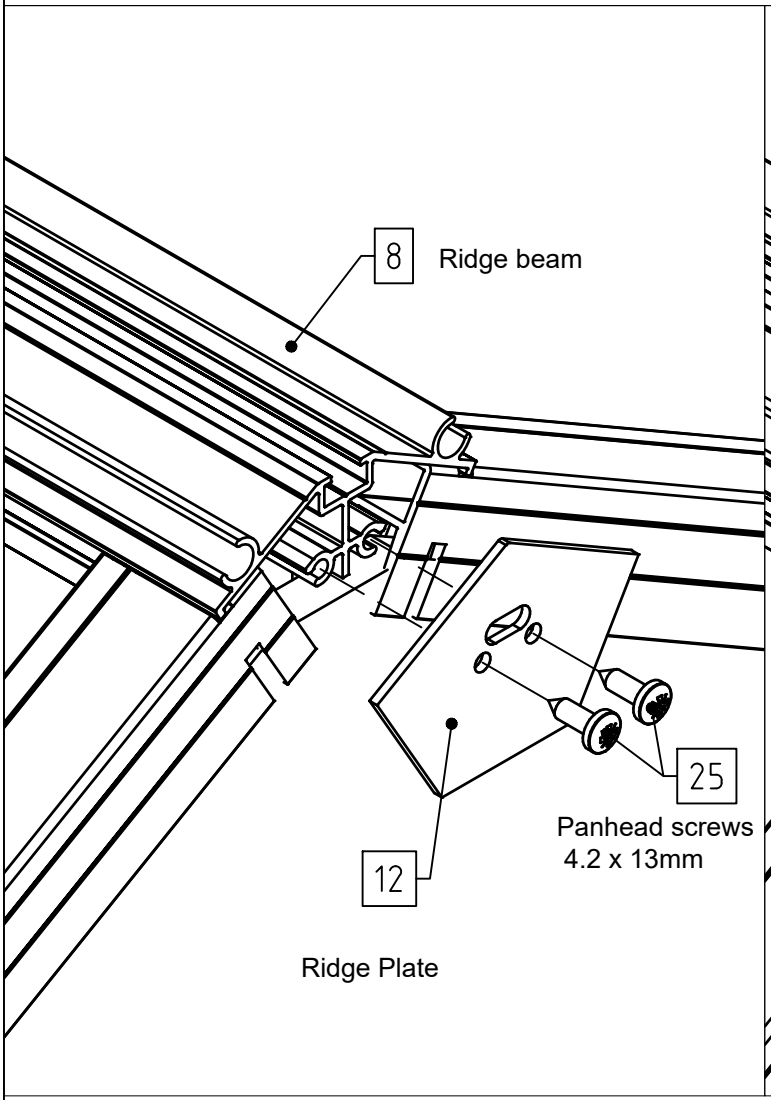
Roof vents cannot be placed side by side. It can be more challenging to install them in the last panel next to gable.

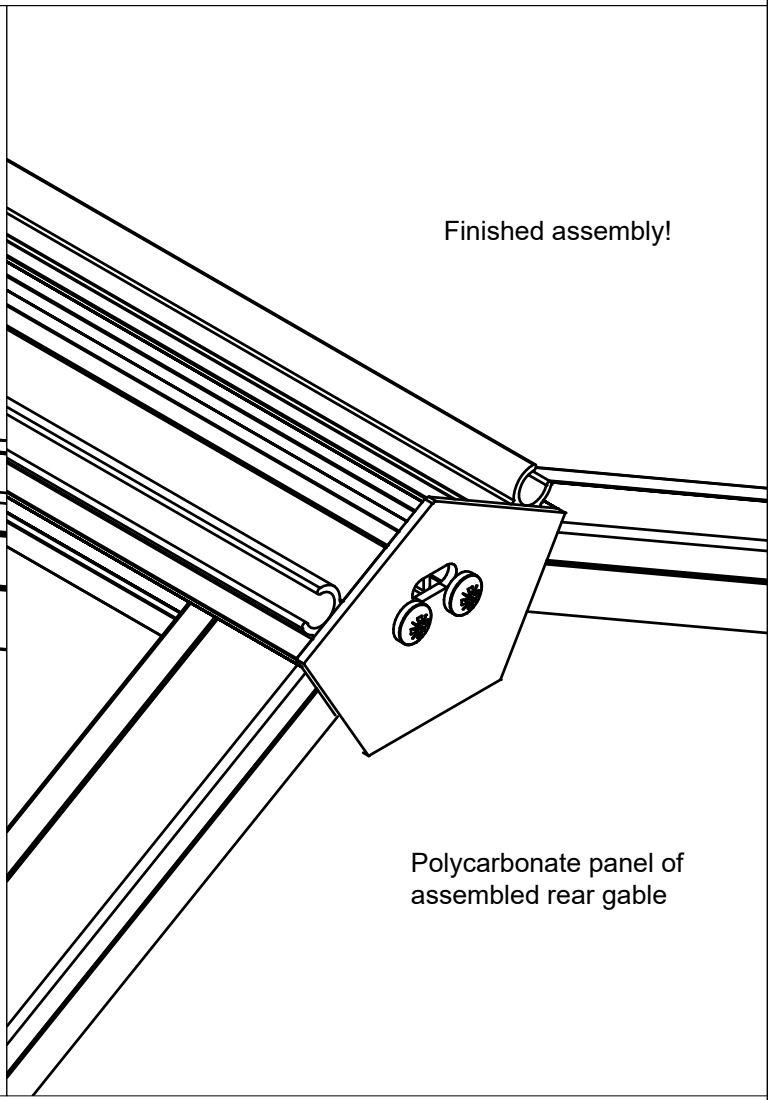
Look closely! Ridge beam inserts along slots on edge curves and should push through until flush with edge of rear gable.





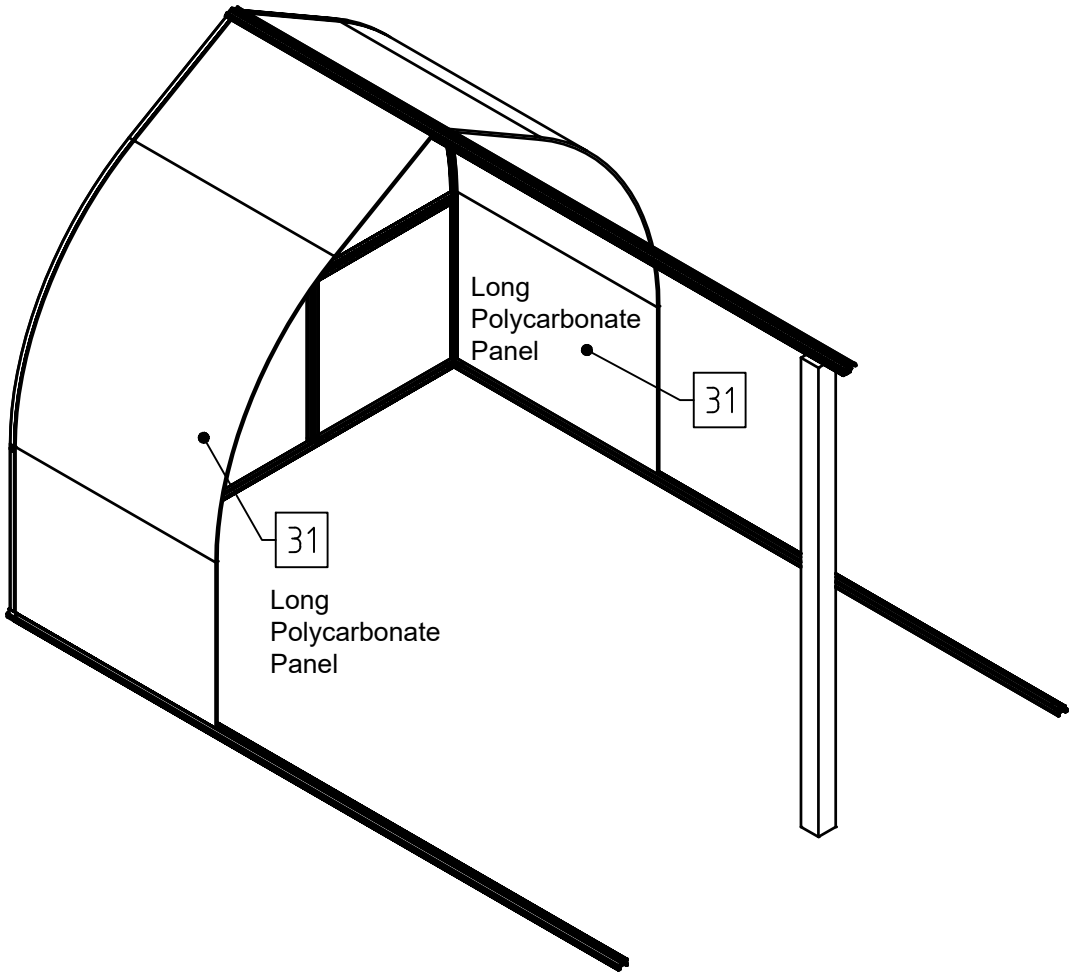

Connect Ridge plate

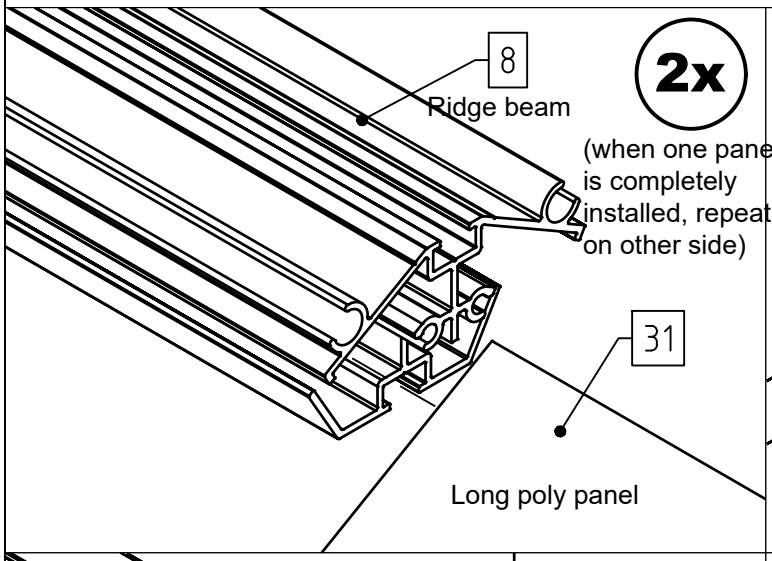

8
Ridge beam
25
Panhead screws
4.2 x 13mm
12
Ridge Plate


Finished assembly!
Polycarbonate panel of
assembled rear gable

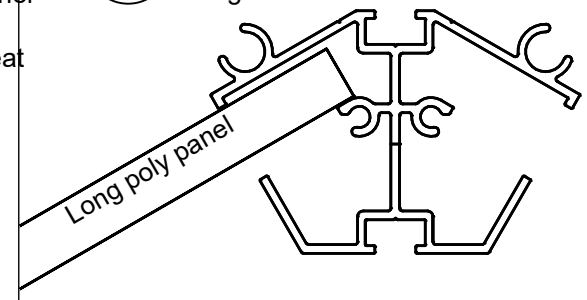
View reversed!

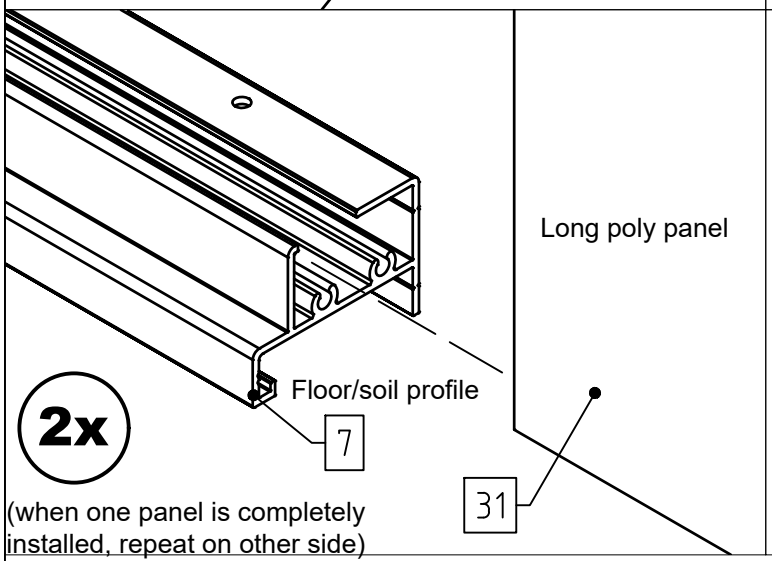
It is helpful to have at least 2 people to insert the long panels. First, insert the top edge into the ridge beam - then insert the bottom edge. Then, slide the panel into the channel on the edge curve. It is helpful to have one person inside the greenhouse pushing the panel outward to match the curvature, while a person on the outside can push in for the straight portions. Work together to slide into the edge curve. The panel should be fully seated into the channels at the ridge, soil profile and edge curve.



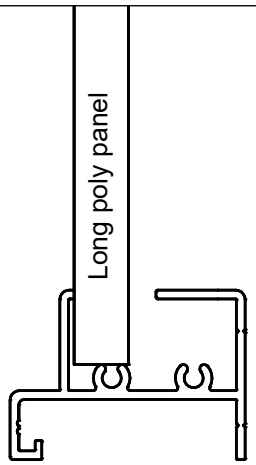


VD Cross-section/simplified view of poly panel at ridge beam





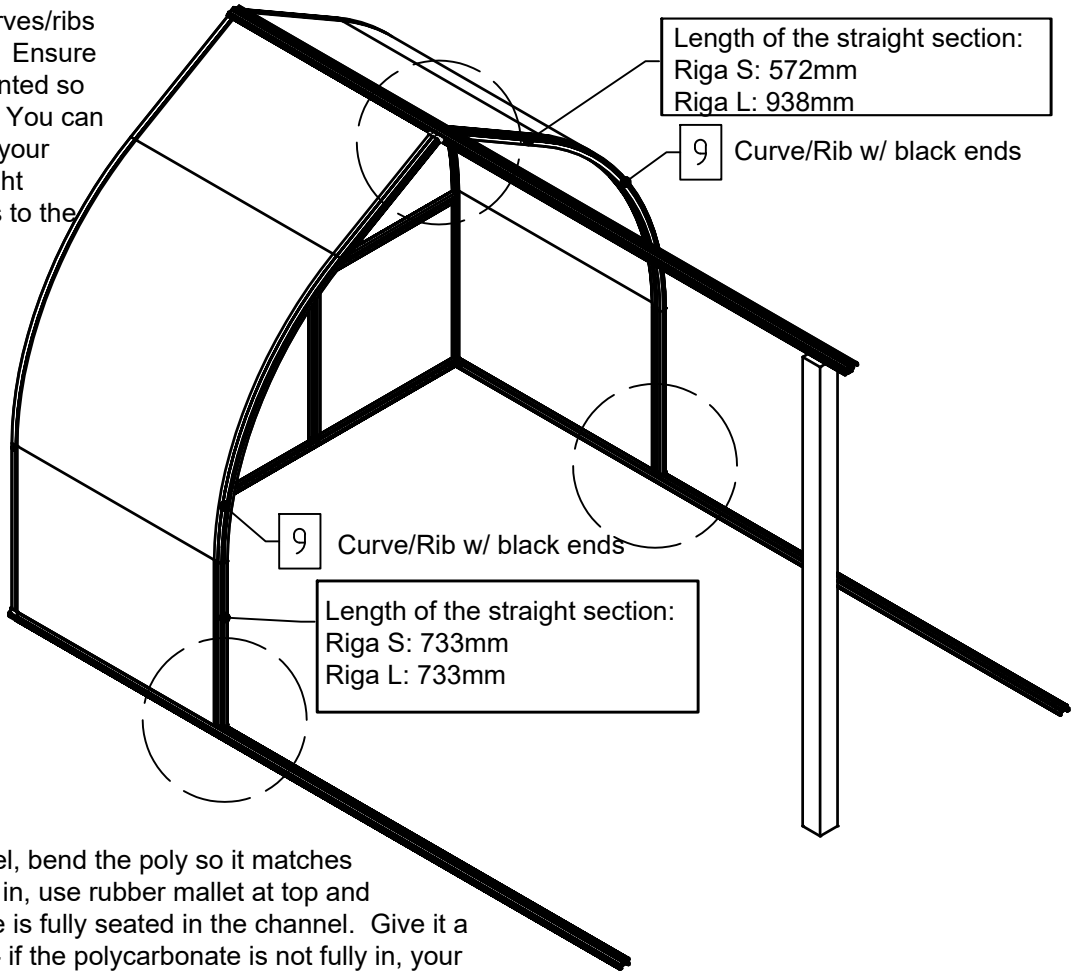
VD



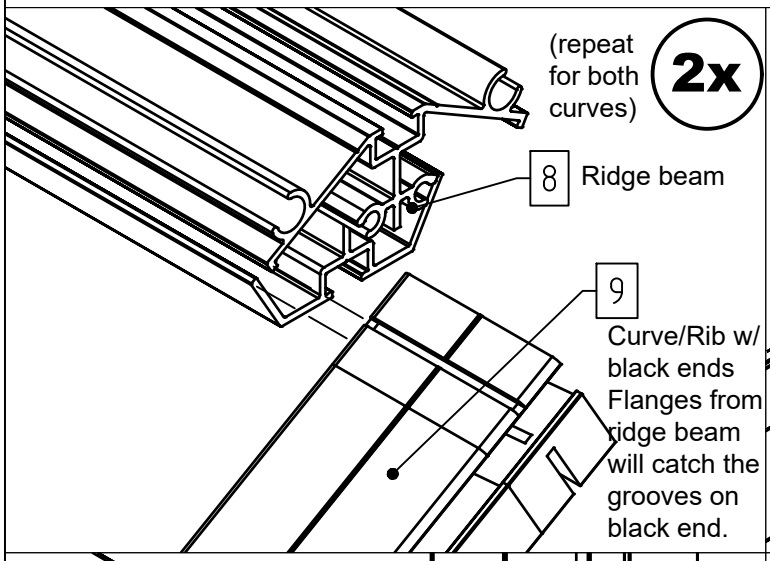
Cross-section/simplified view of poly panel at soil/floor profile

Important! The curvature of the curves/ribs is different at the bottom vs. the top. Ensure your curve profiles are correctly oriented so they are not installed upside down. You can check this by matching the curve to your gable end curves, or note the "straight section" measurements in the boxes to the right.

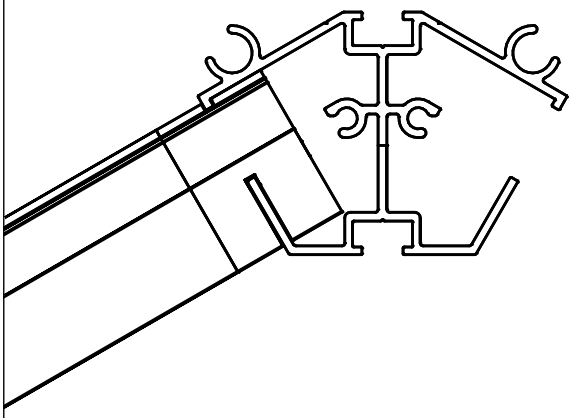
Note: The curves/ribs will slide in from the open end of the ridge and soil profiles (shown below). We recommend spraying the black ends with white lithium grease to help them slide against the aluminum. It is best to have a rubber mallet on hand to alternatively "pound" the top, then bottom, of the curves along the ridge and soil profiles. This will help them slide along - the rubber mallet will not hurt the aluminum profiles.

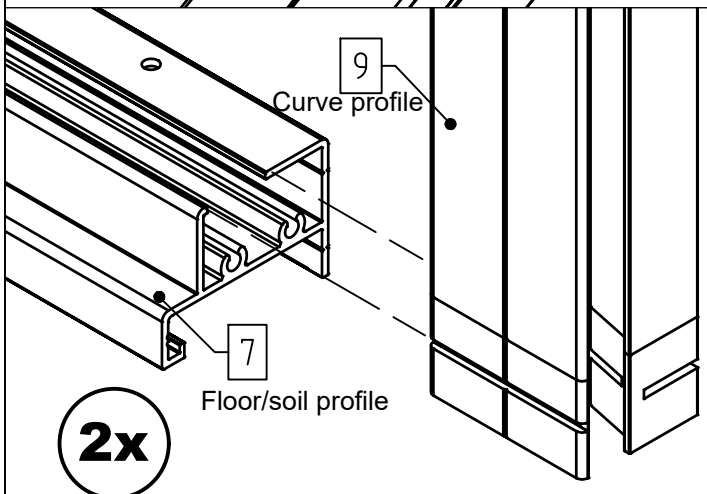


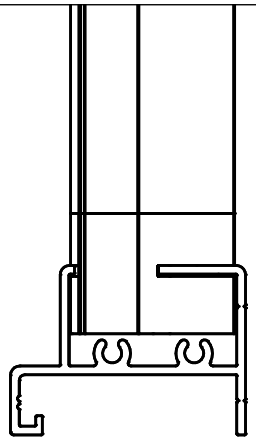
Once the curve meets your poly panel, bend the poly so it matches the channel on the curve. When it is in, use rubber mallet at top and bottom to ensure polycarbonate edge is fully seated in the channel. Give it a few good whacks for good measure - if the polycarbonate is not fully in, your curves will not be in the proper position and this will cause issues later.



Simplified Cross-section view



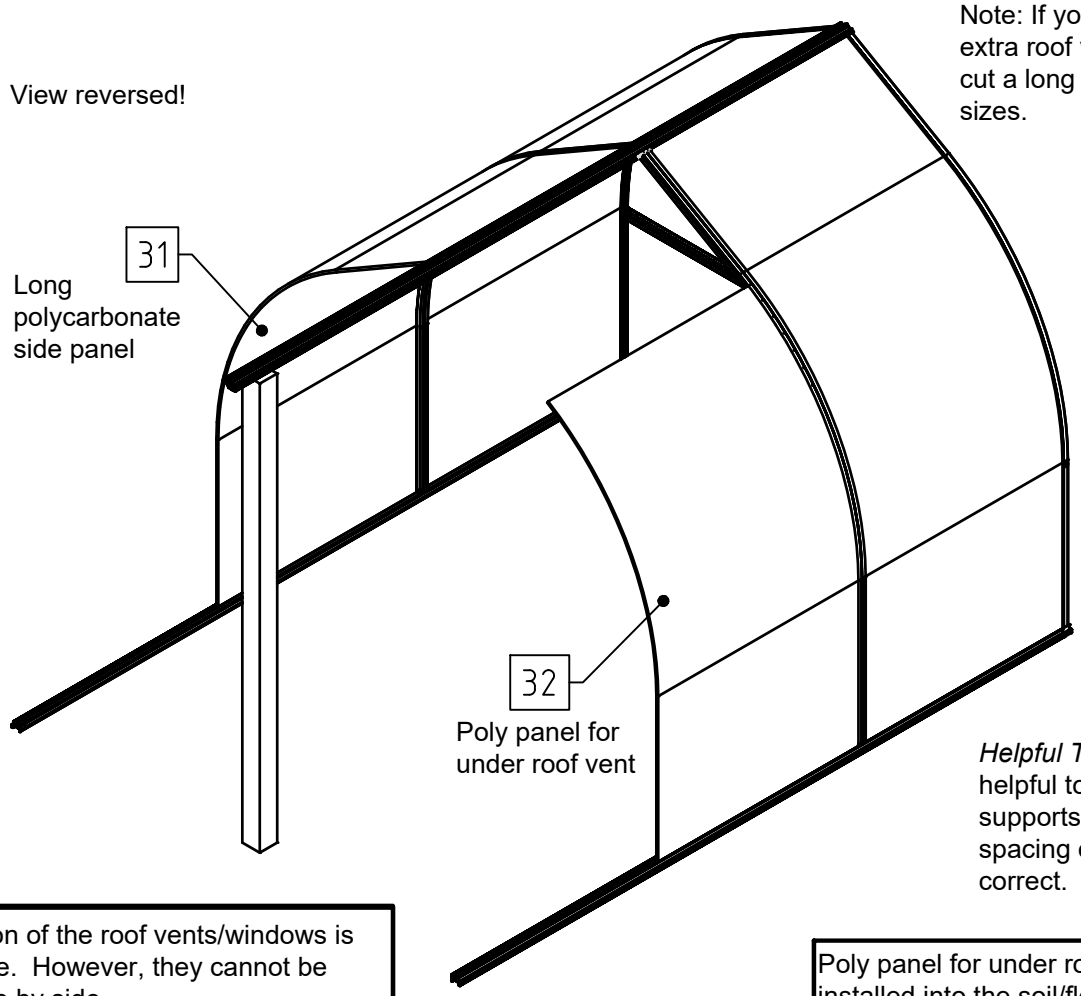




Simplified Cross-section view

View reversed!

Note: If you have ordered an extra roof vent, you will need to cut a long panel to the smaller sizes.

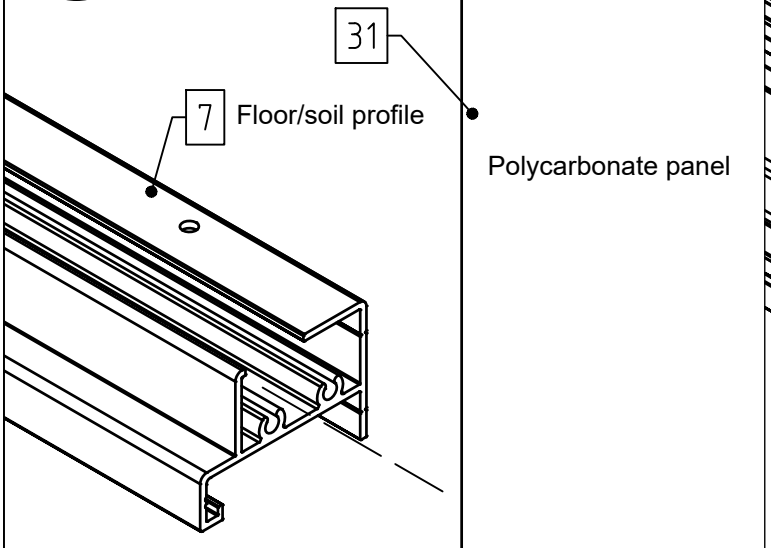


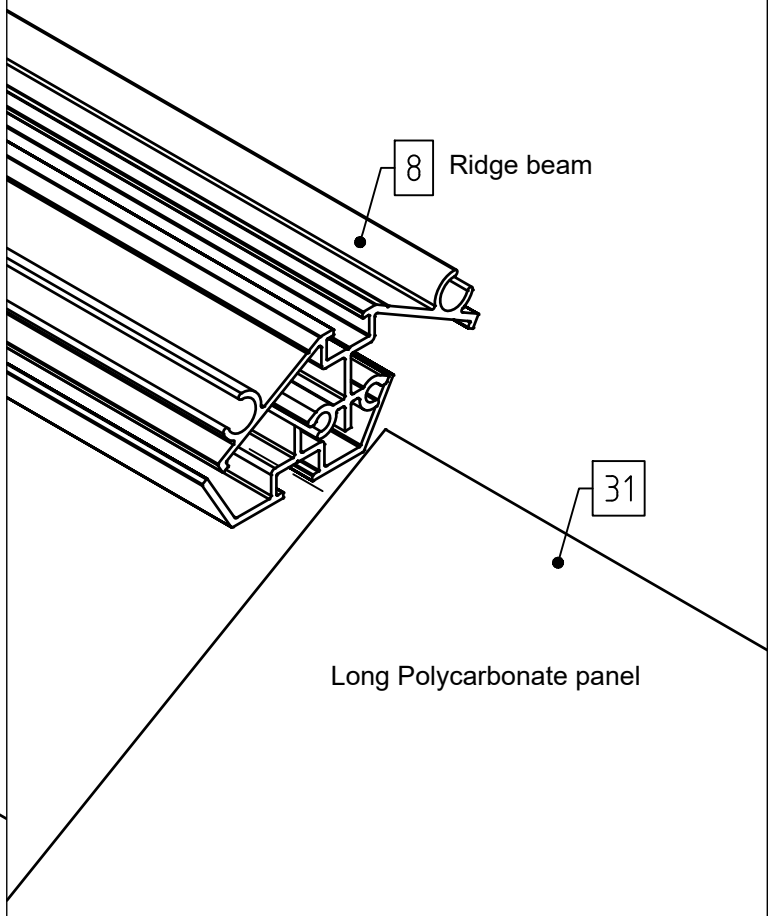
Helpful Tip: You may find it helpful to install your lateral supports now to ensure the spacing of your curves is correct. See page 123.

The position of the roof vents/windows is your choice. However, they cannot be placed side by side.

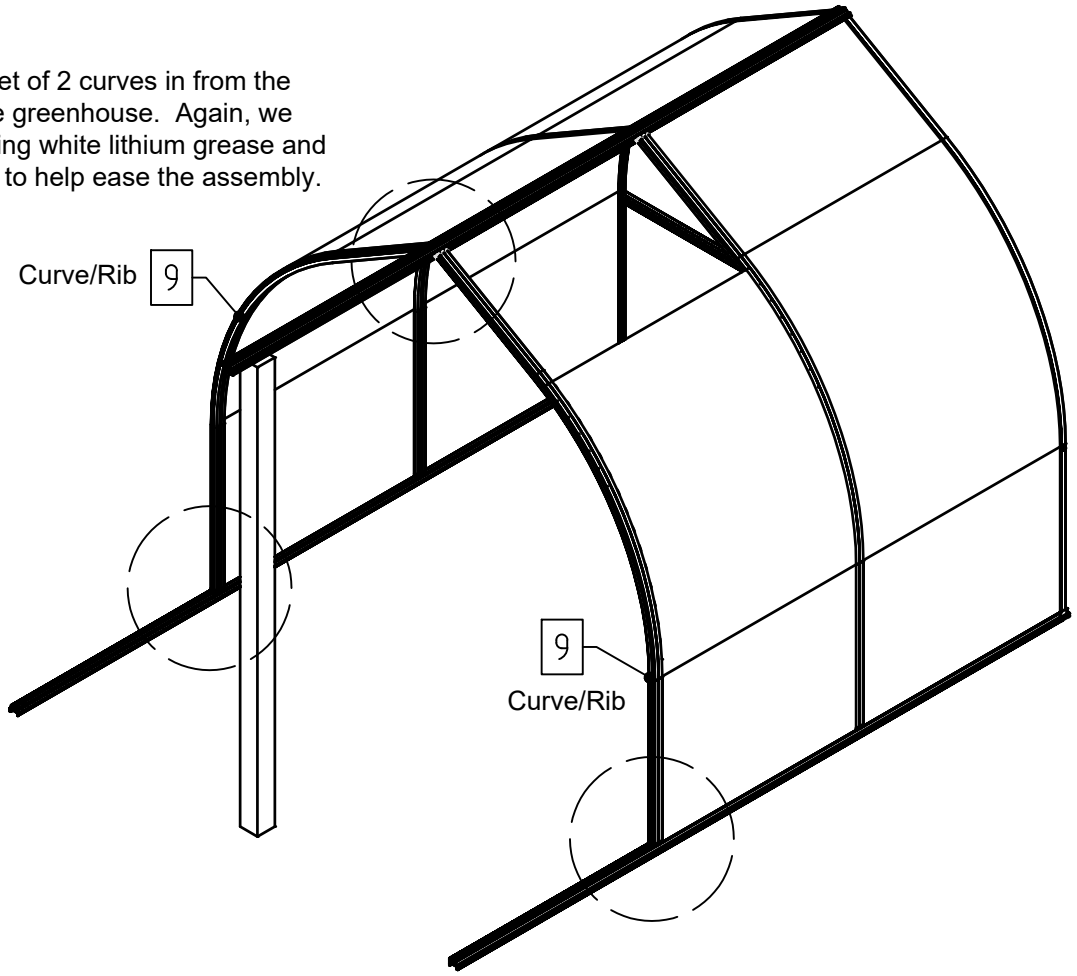
Poly panel for under roof vent is only installed into the soil/floor profile and curve.

2x (repeat insertion of polycarbonate panels on both sides)

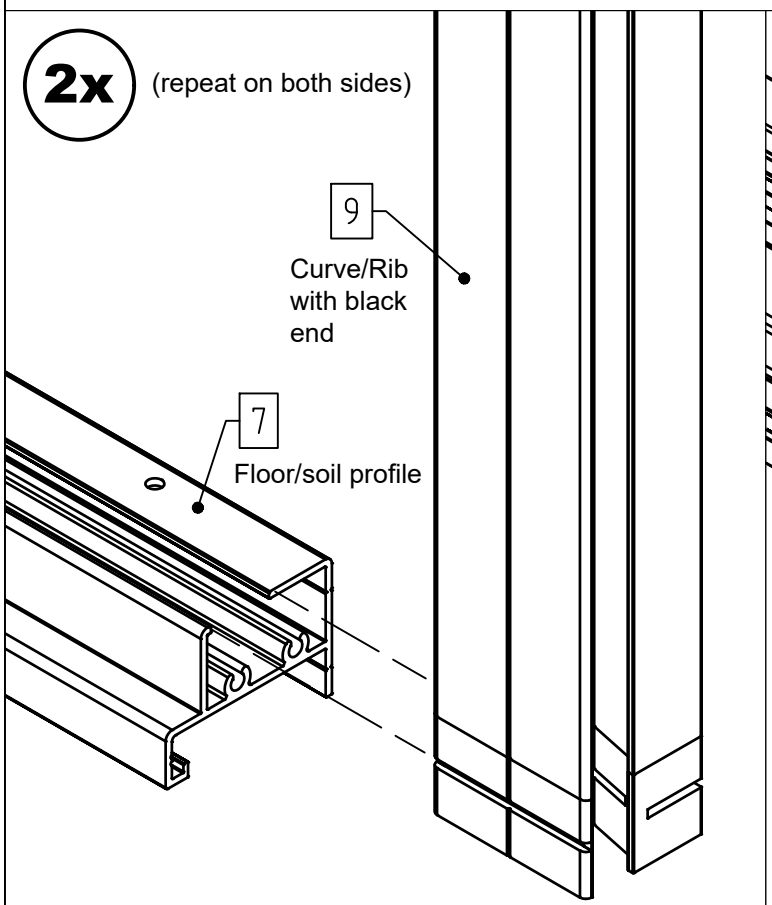




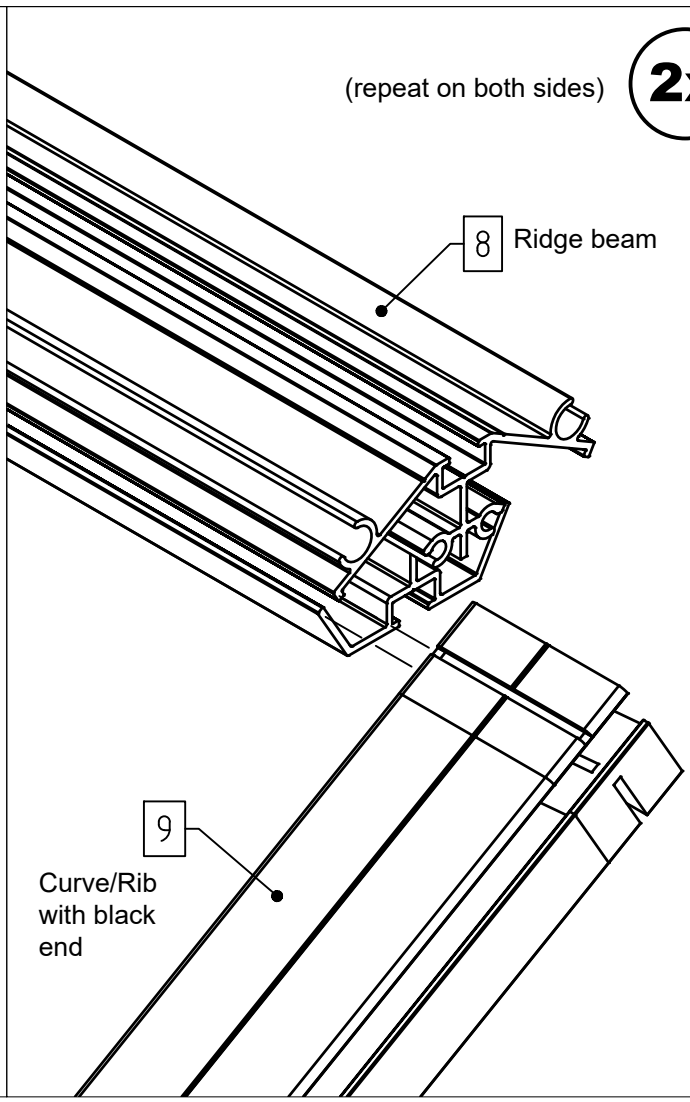
Slide another set of 2 curves in from the open end of the greenhouse. Again, we recommend using white lithium grease and a rubber mallet to help ease the assembly.



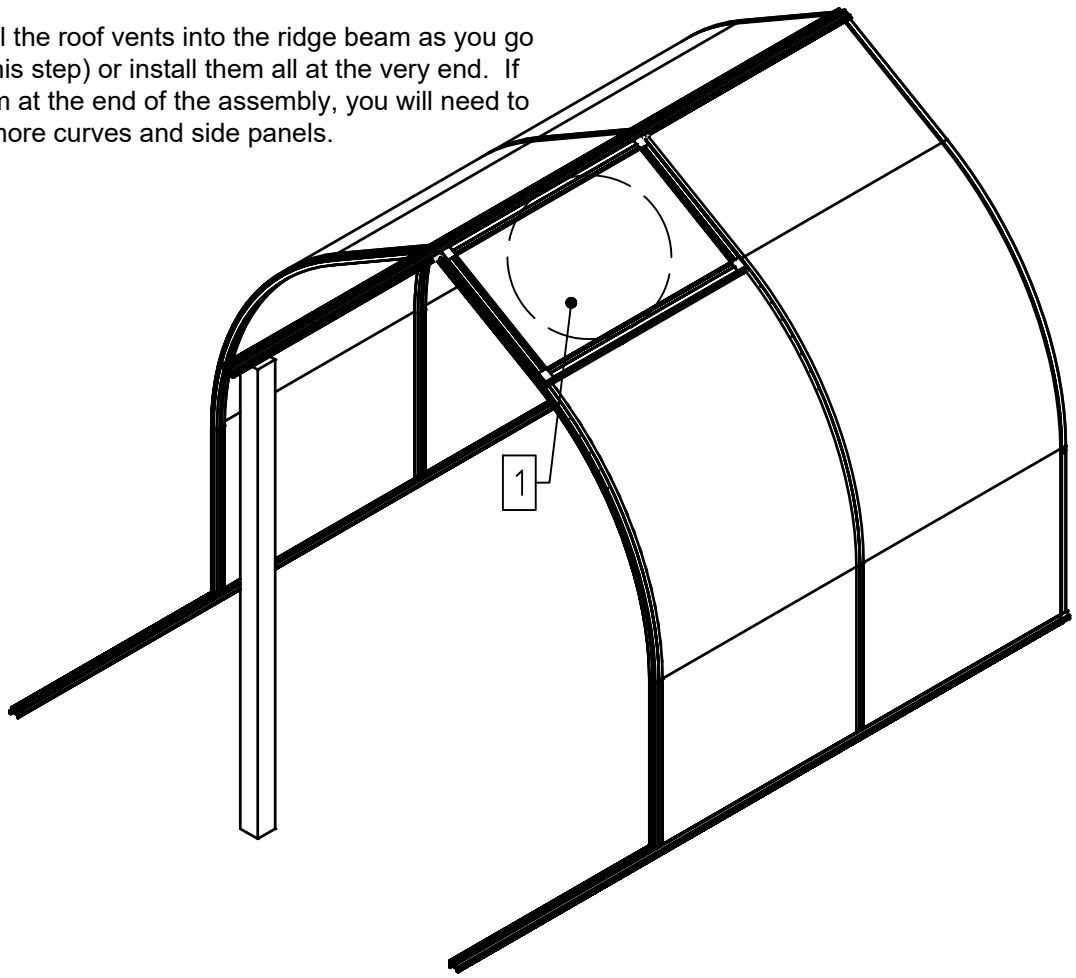
2x (repeat on both sides)



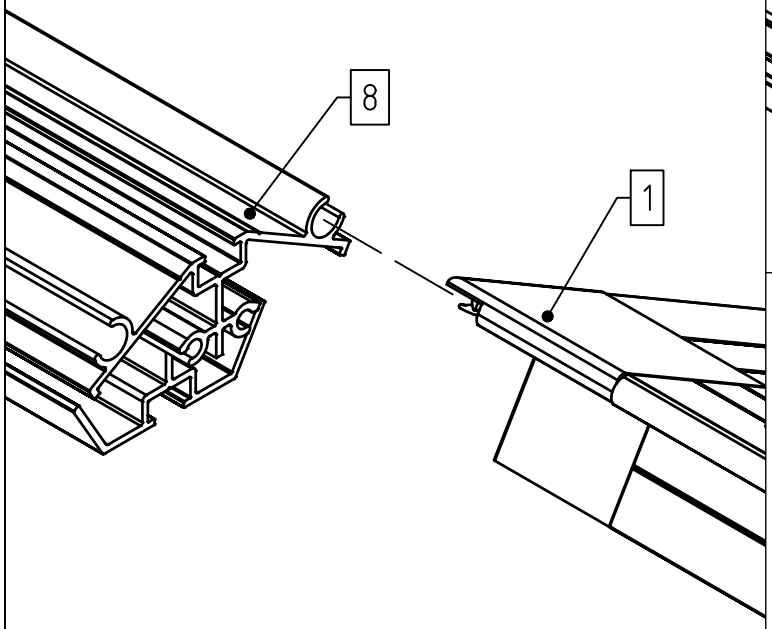
(repeat on both sides) **2x**

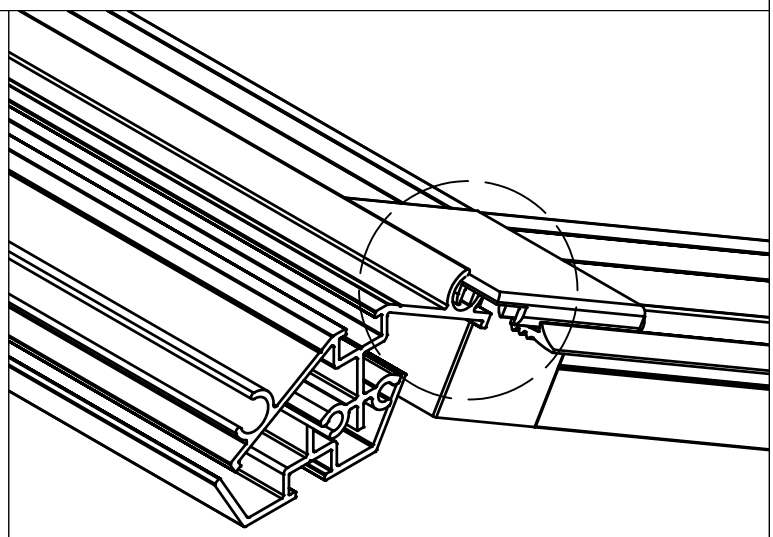


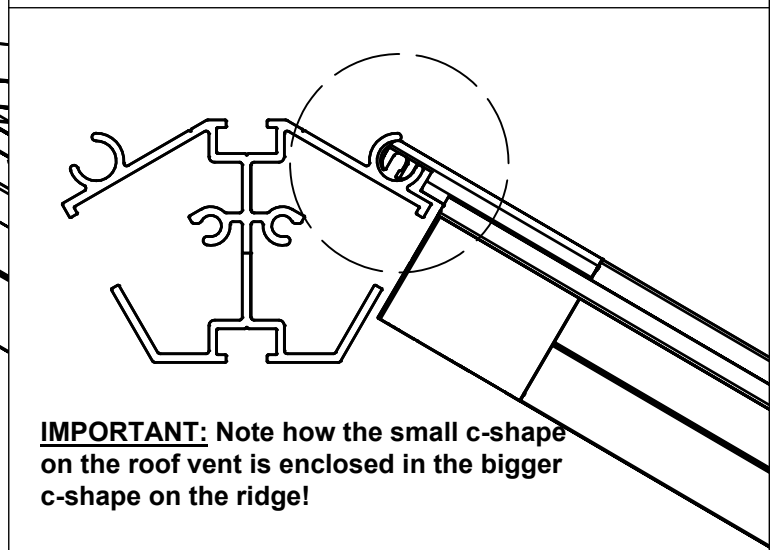
You may install the roof vents into the ridge beam as you go (as shown in this step) or install them all at the very end. If you install them at the end of the assembly, you will need to lift them over more curves and side panels.



VERY IMPORTANT! The roof vent slides into the end of the ridge beam. Look very carefully at these drawings - note the small c-shaped channel is <u>encased inside</u> the larger c-shaped channel on the ridge beam to create the hinge point. If your window is popping out/off, you do not have it inserted properly. Be patient and look carefully, it may take a few tries.

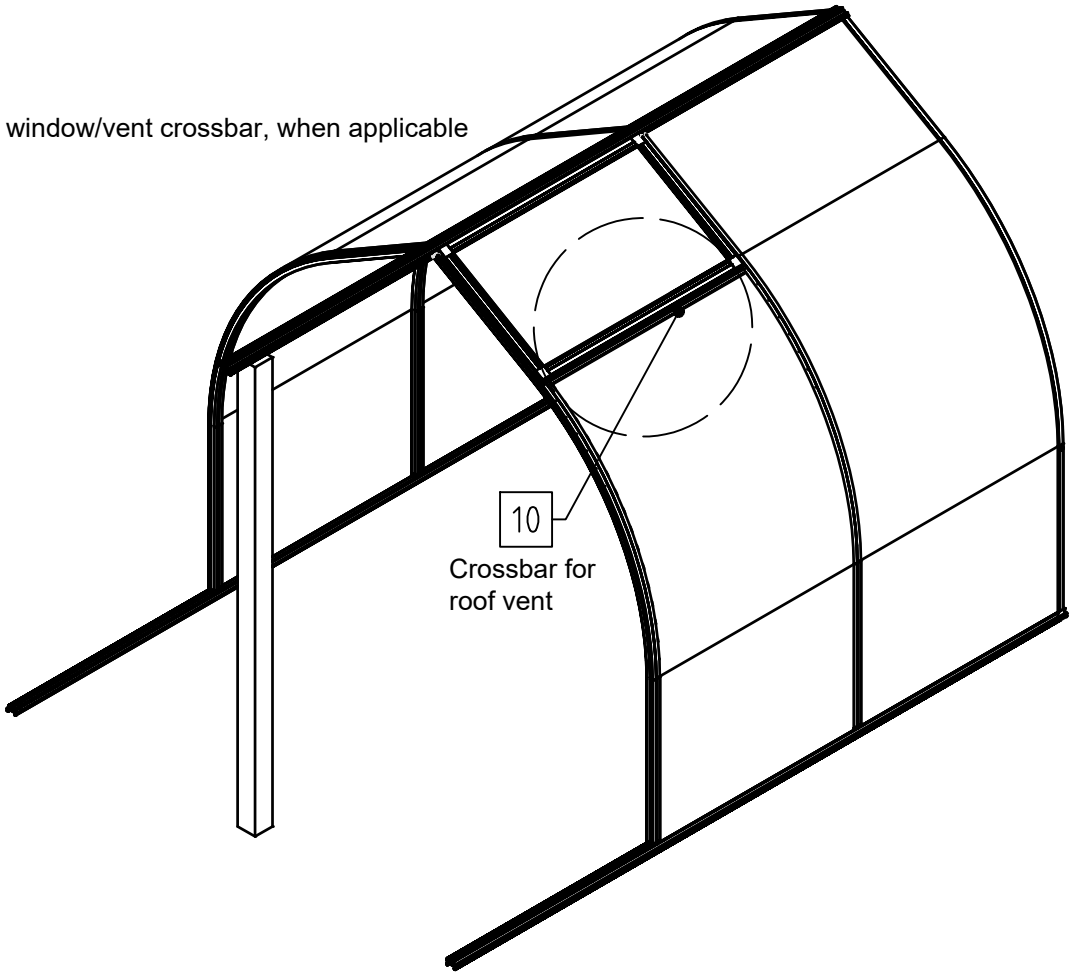




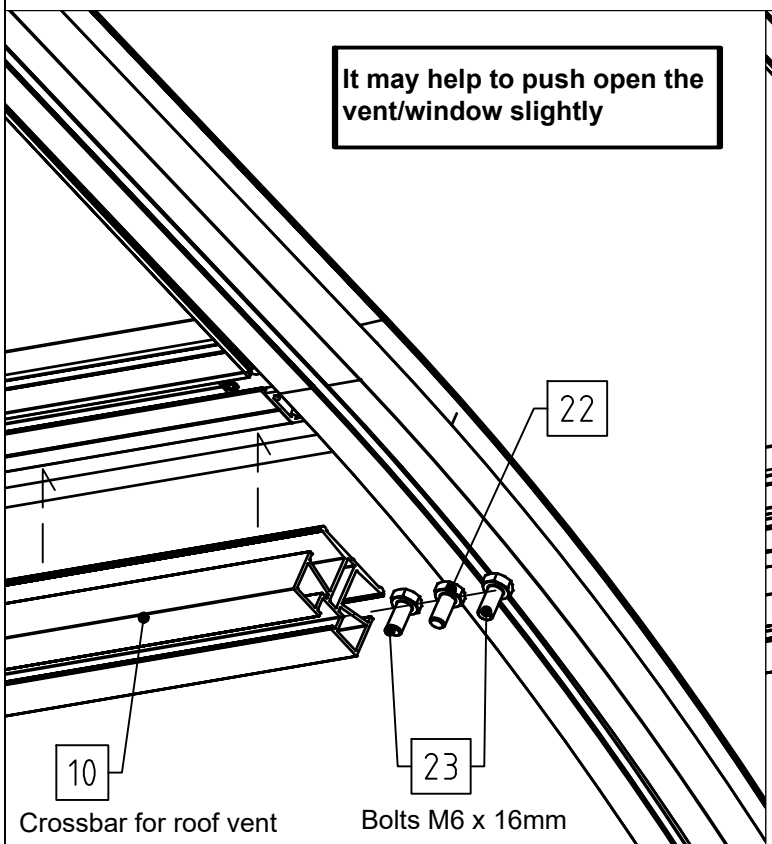


<u>IMPORTANT:</u> Note how the small c-shape on the roof vent is enclosed in the bigger c-shape on the ridge!

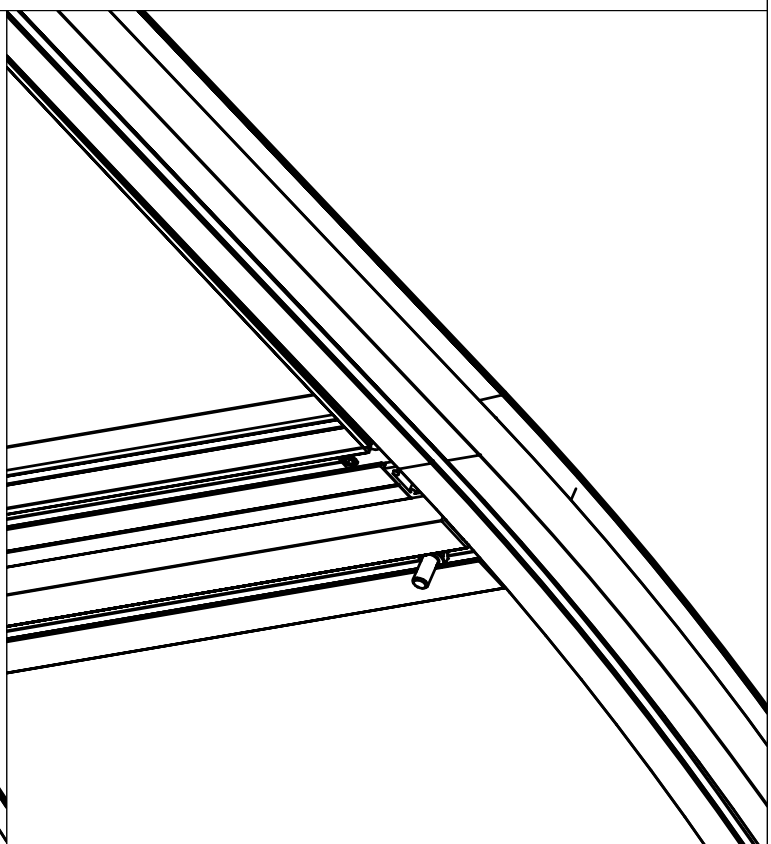
Install the roof window/vent crossbar, when applicable



It may help to push open the vent/window slightly

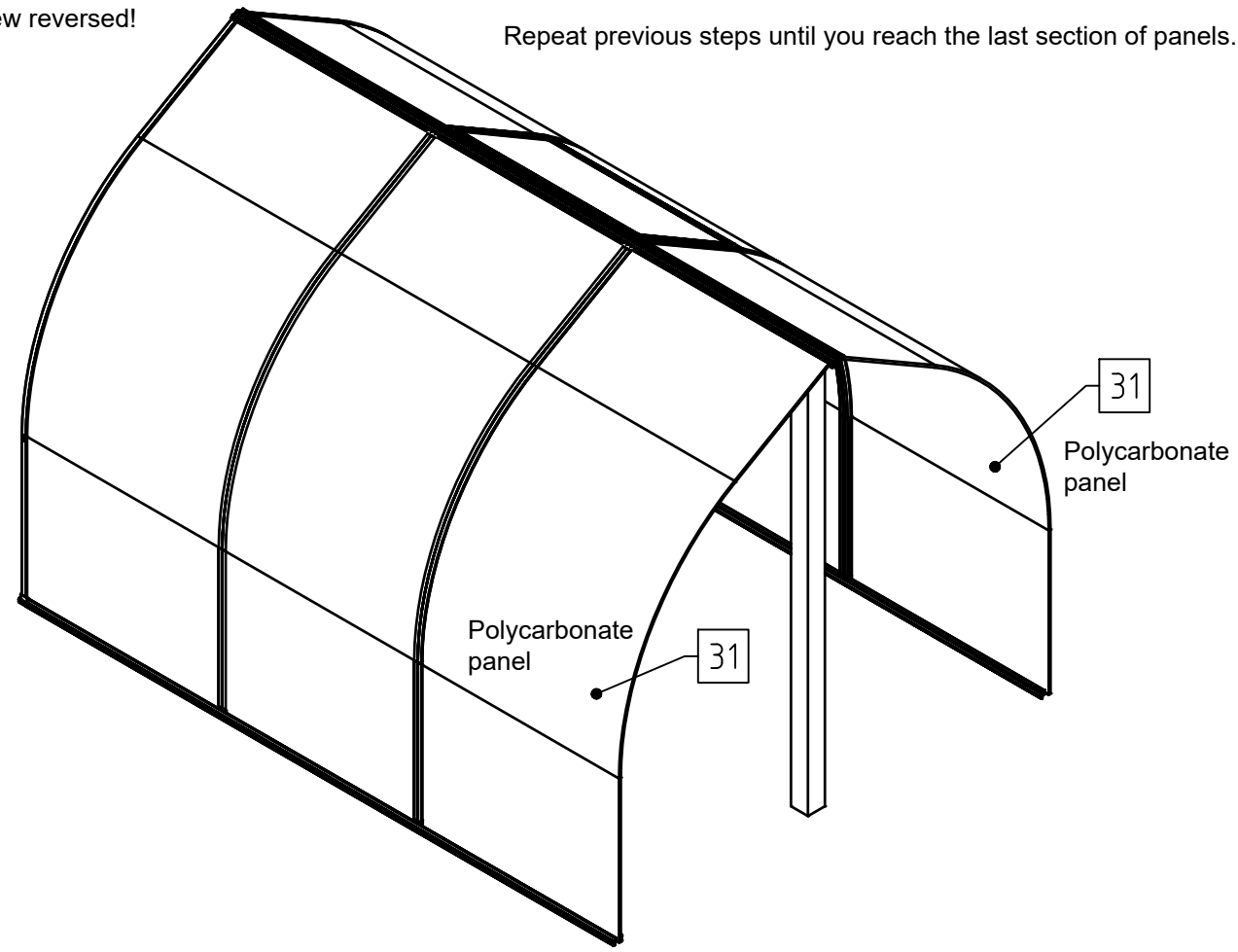


Add some silicone to the ends on the cross bar and seat the crossbar on top of the polycarbonate panel. The silicone can help prevent drips where the crossbar meets the curves.

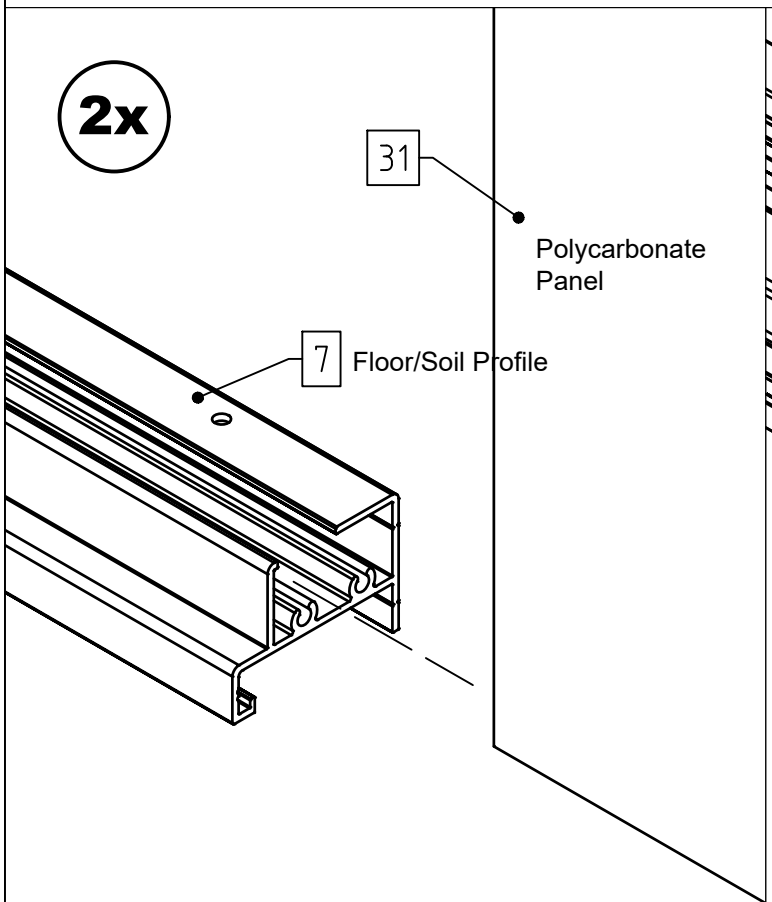


View reversed!

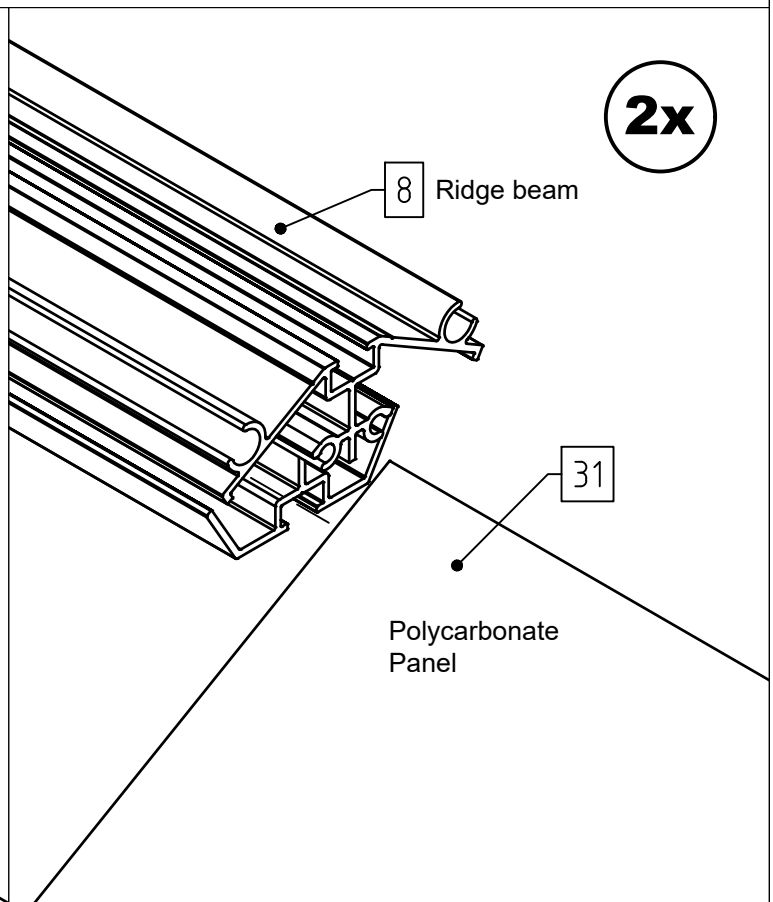
Repeat previous steps until you reach the last section of panels.

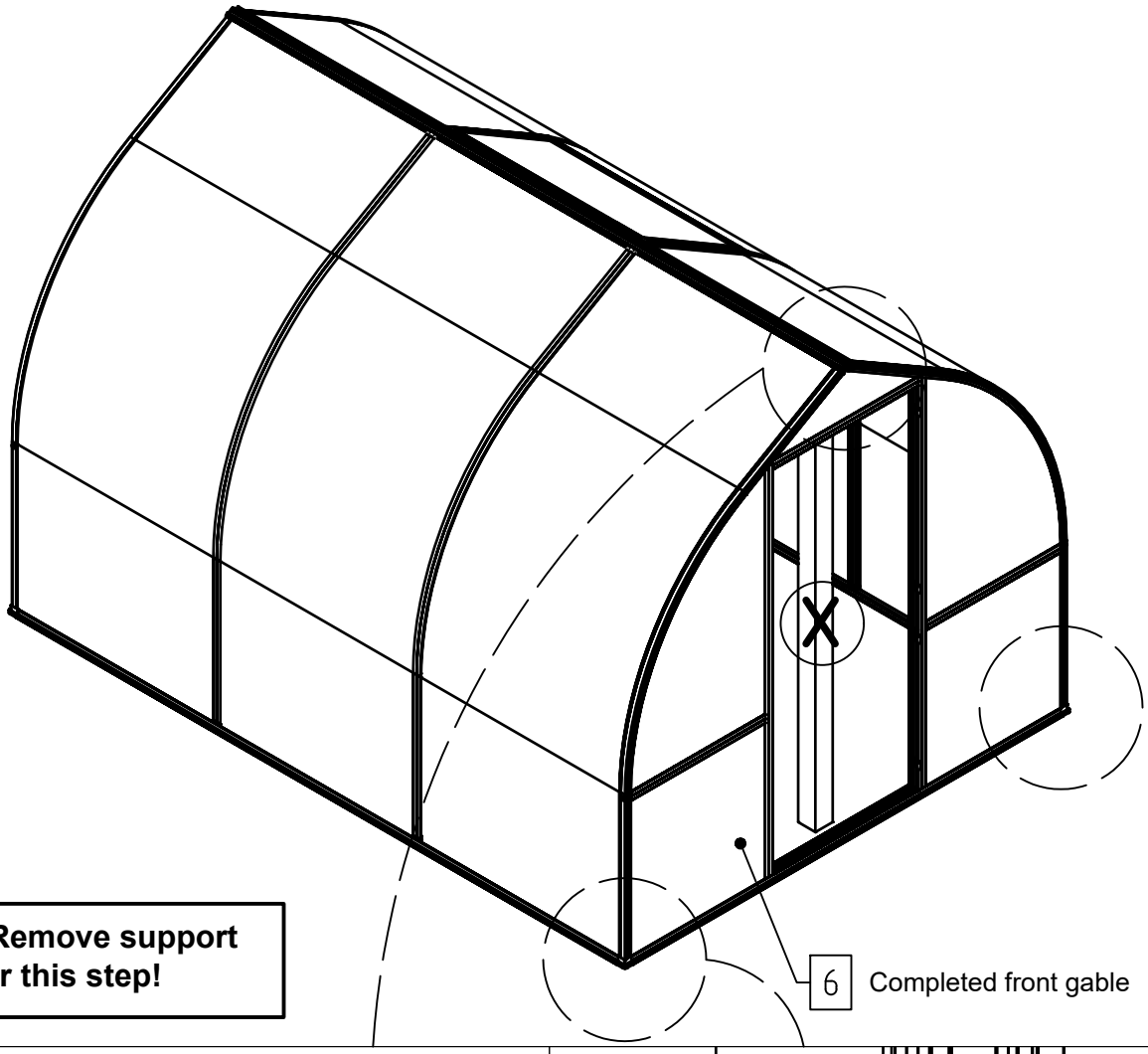


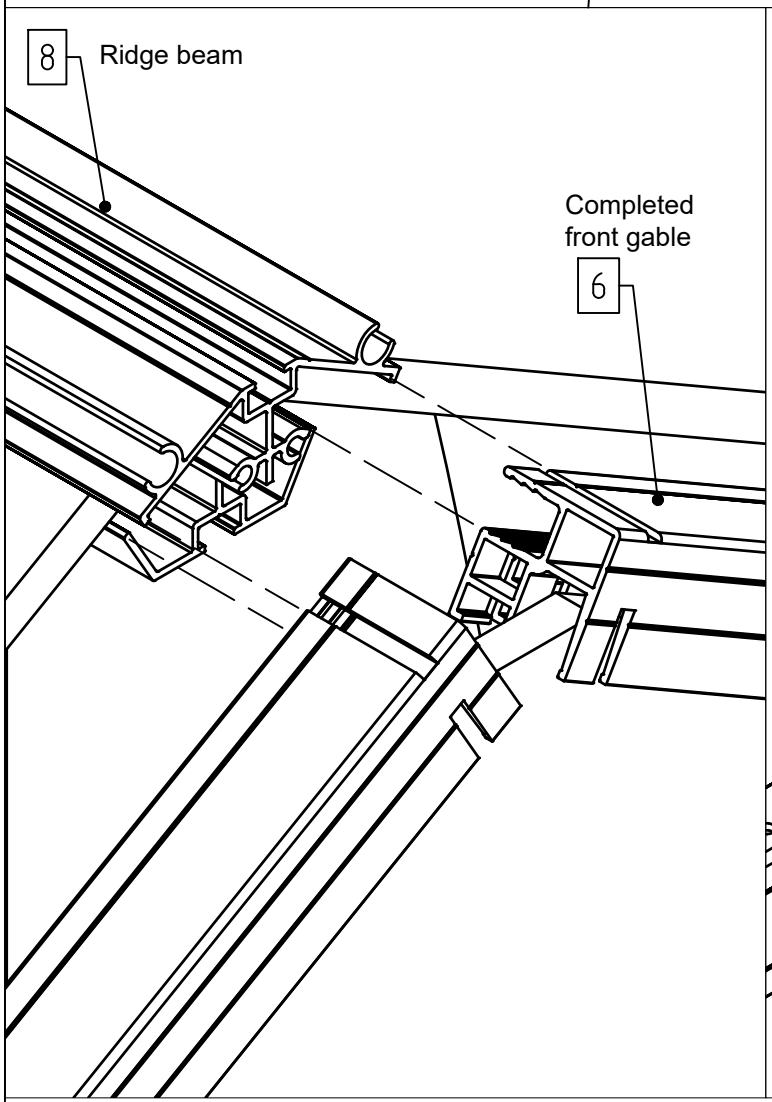
2x

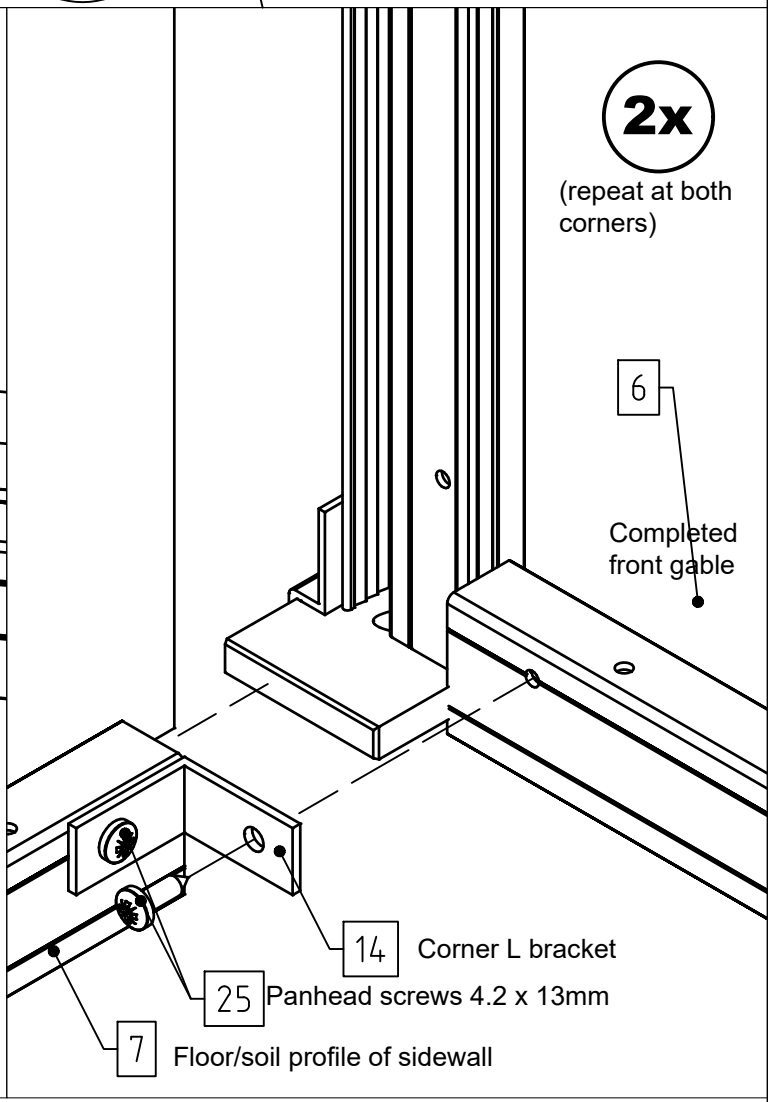


2x

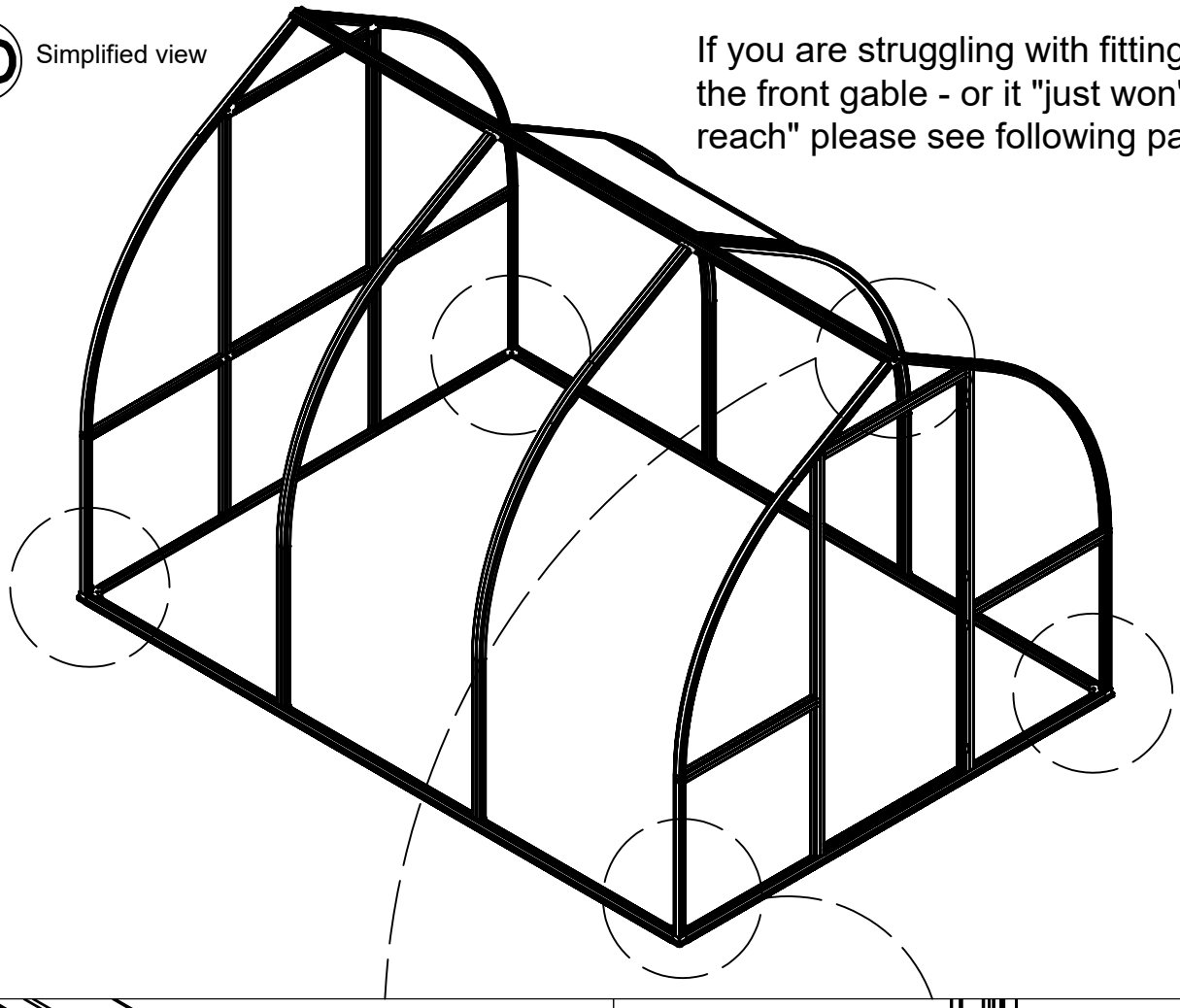



= Remove support after this step!
6 Completed front gable

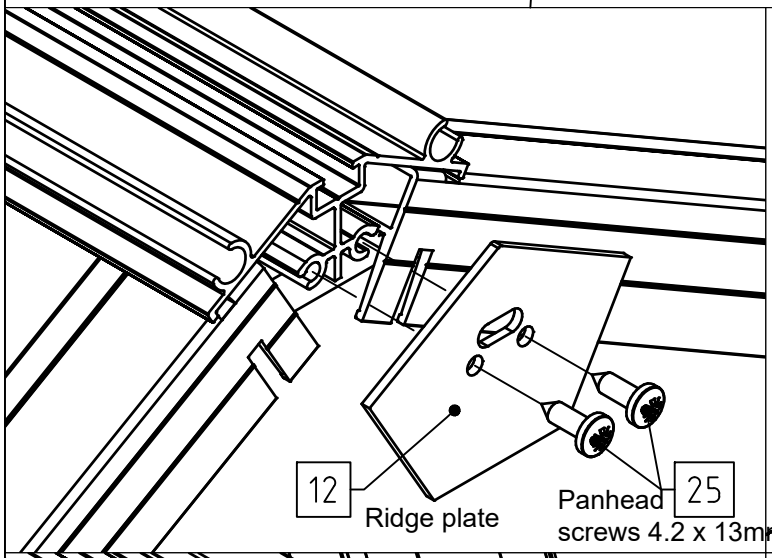

8 Ridge beam
Completed front gable
6

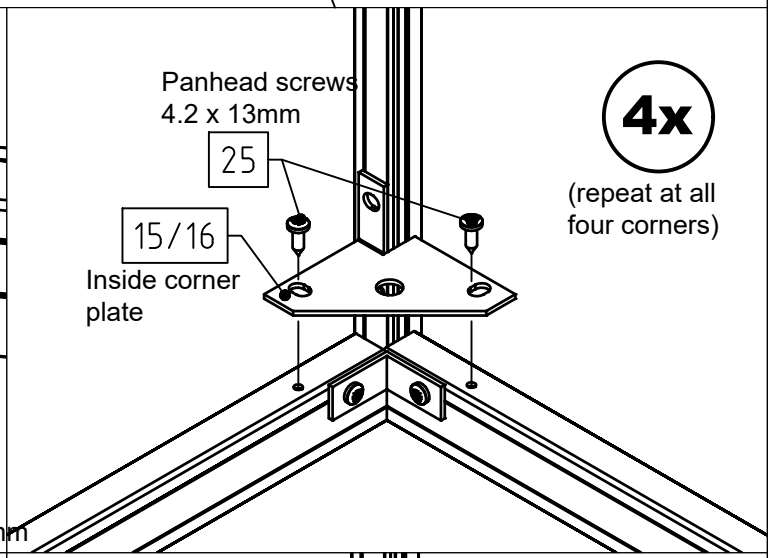

2x
(repeat at both corners)
6
Completed front gable
14 Corner L bracket
25 Panhead screws 4.2 x 13mm
7 Floor/soil profile of sidewall

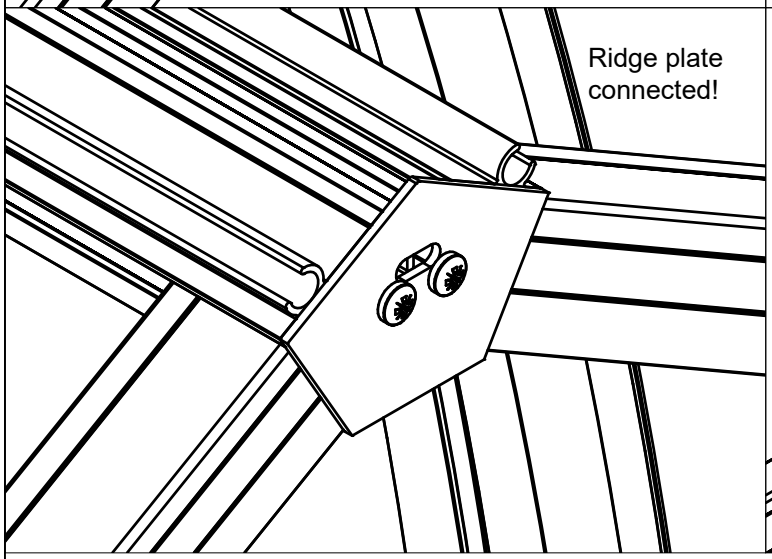
VD Simplified view

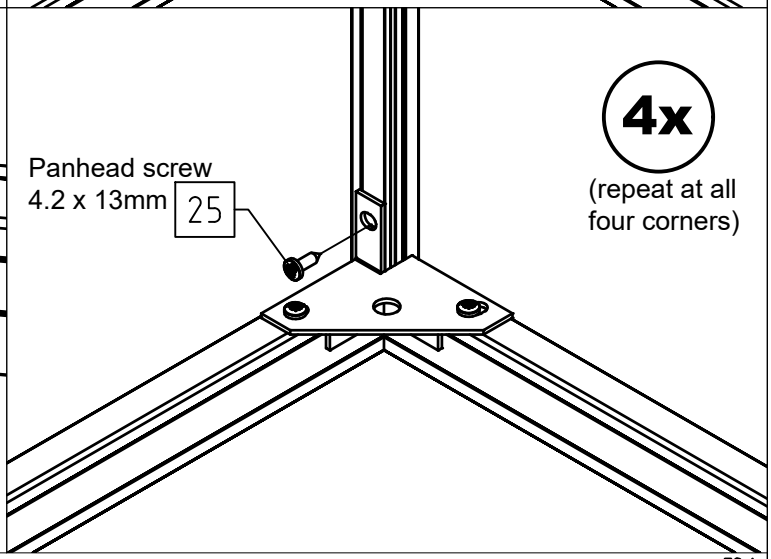


If you are struggling with fitting on the front gable - or it "just won't reach" please see following page!









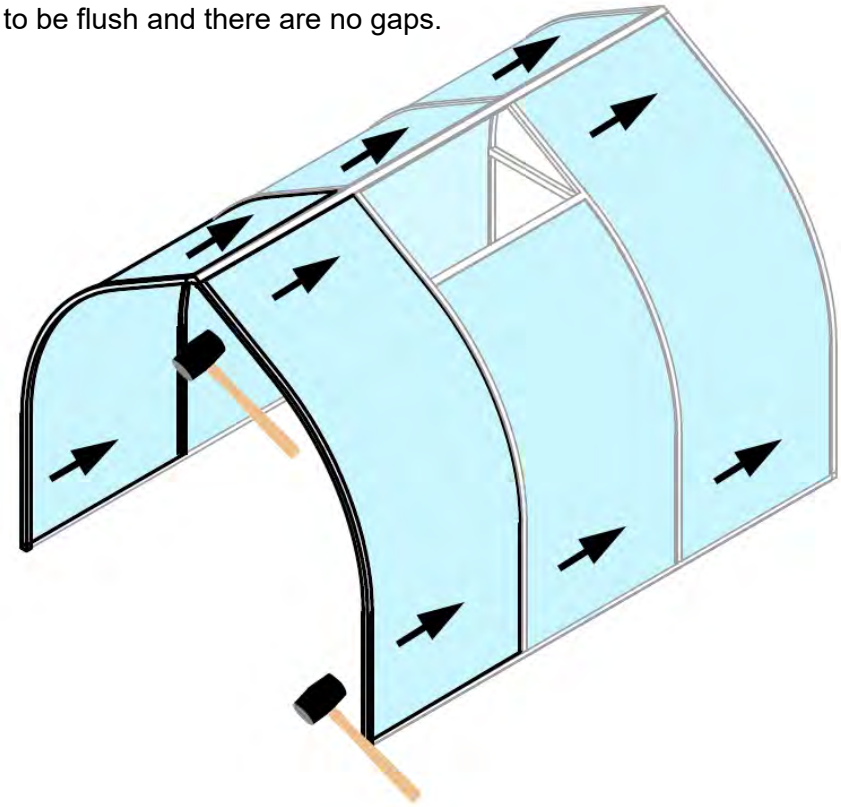
ZS-L

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.

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.

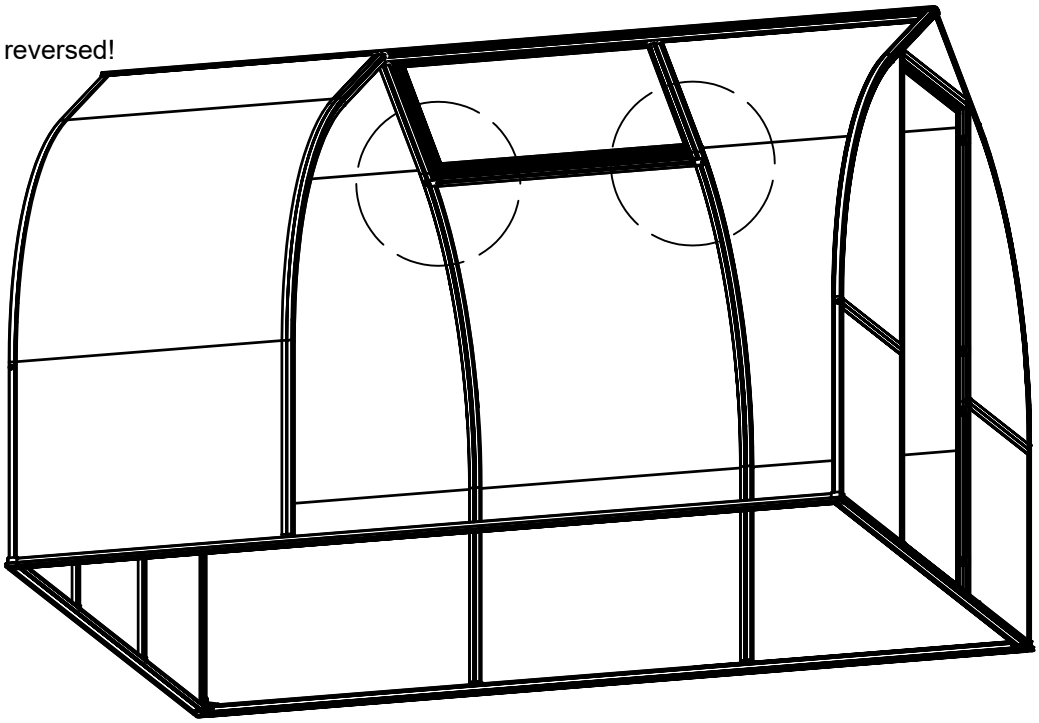
Ratchet Strap: use a ratchet strap and attach one side to the installed gable end (back wall) then to the front gable end. Gradually pull on the ratchet strap until the the front gable end is installed to be flush and there are no gaps.



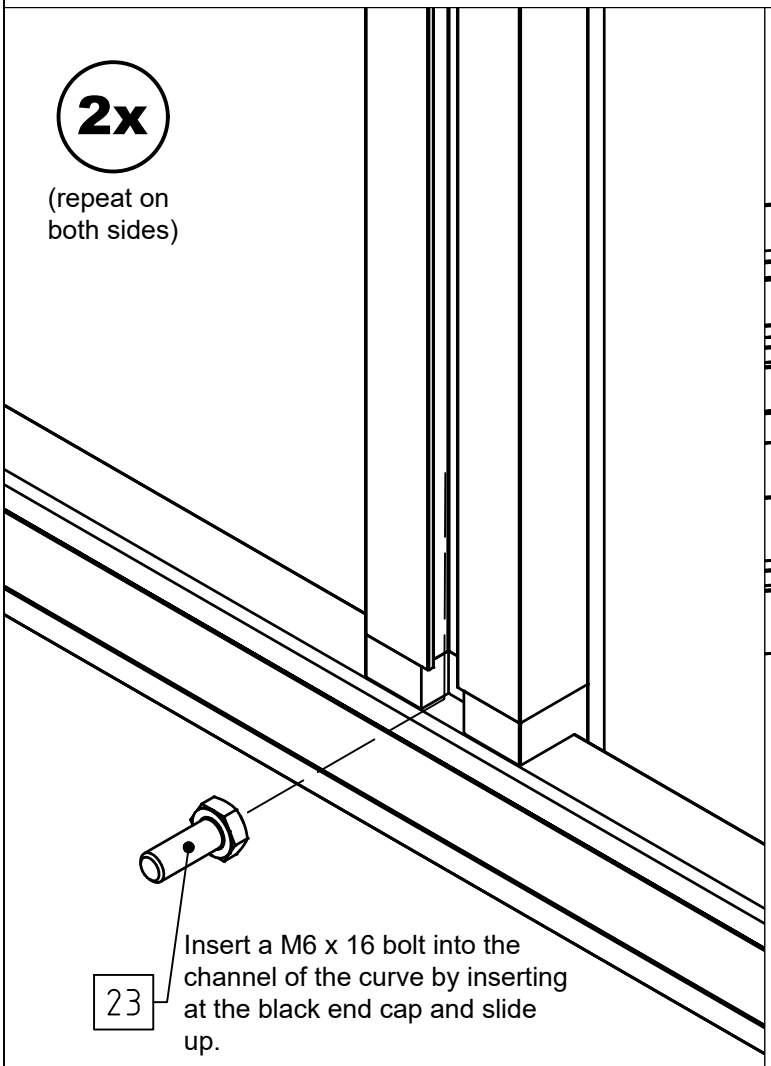
VD Simplified view

View reversed!

Attach the window crossbars.

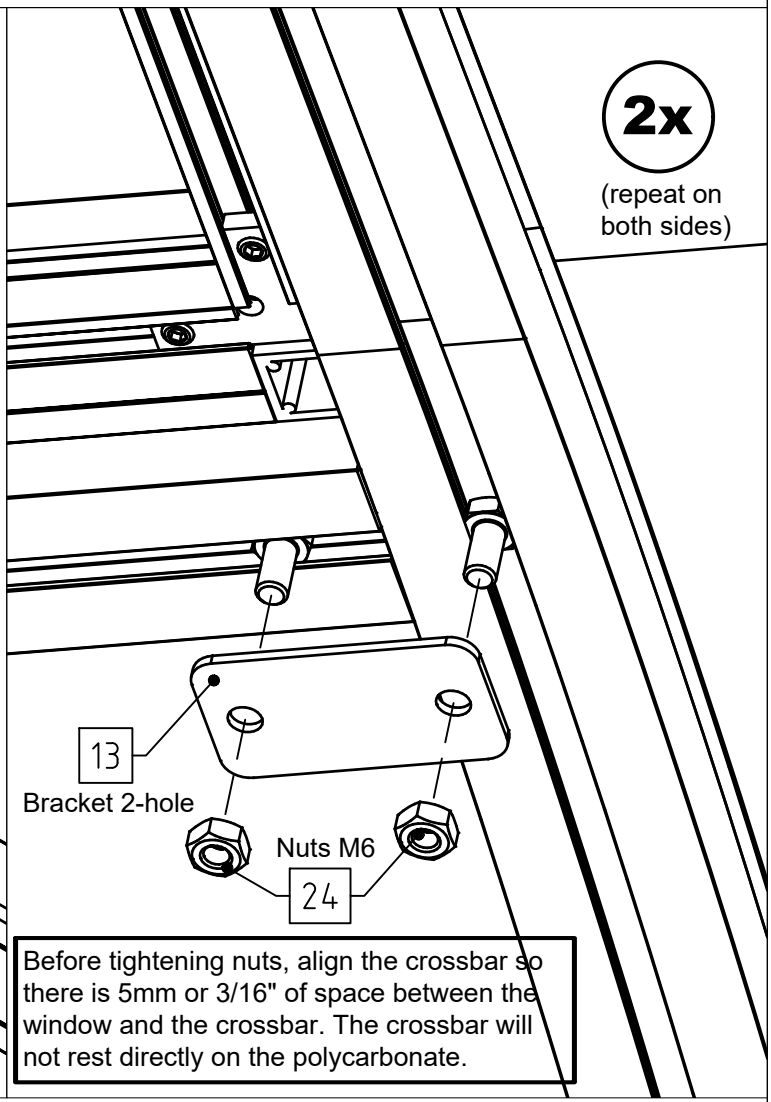


2x
(repeat on
both sides)



Insert a M6 x 16 bolt into the channel of the curve by inserting at the black end cap and slide up.

2x
(repeat on
both sides)

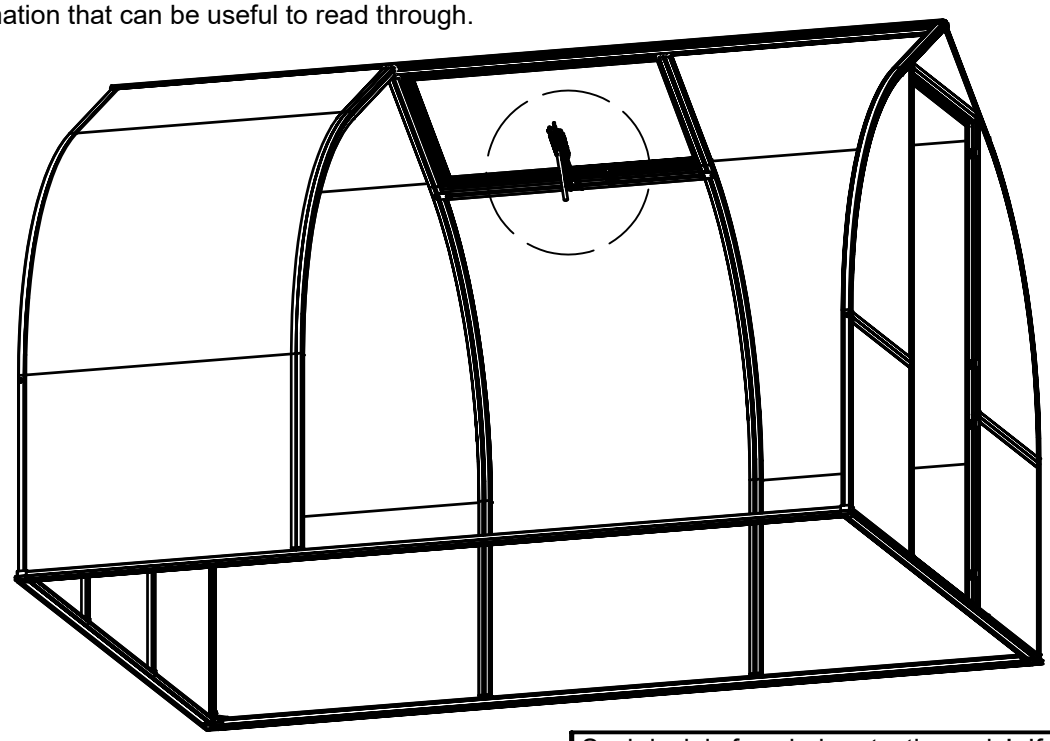


Before tightening nuts, align the crossbar so there is 5mm or 3/16" of space between the window and the crossbar. The crossbar will not rest directly on the polycarbonate.

ZS-M

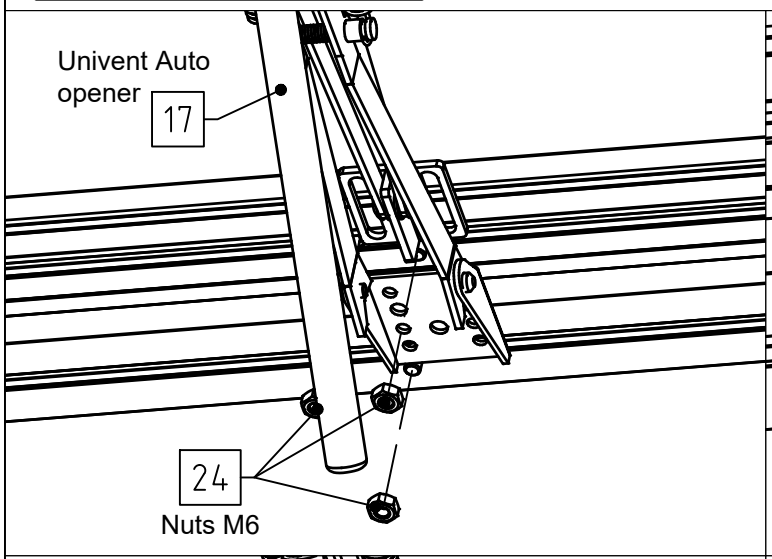
VD Simplified view

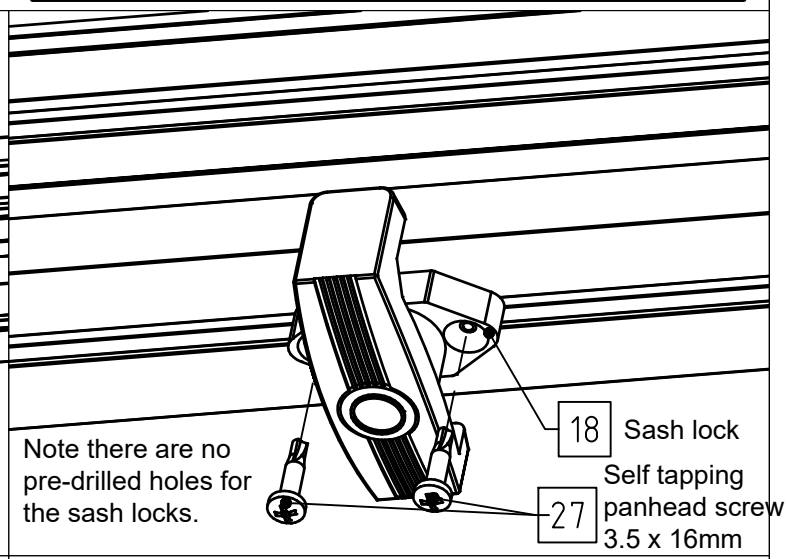
BEFORE INSTALLING THE AUTO OPENER, please study the following pages to understand how to install, how they work, and suggested maintenance. The Univent boxes also have installation and resource information that can be useful to read through.

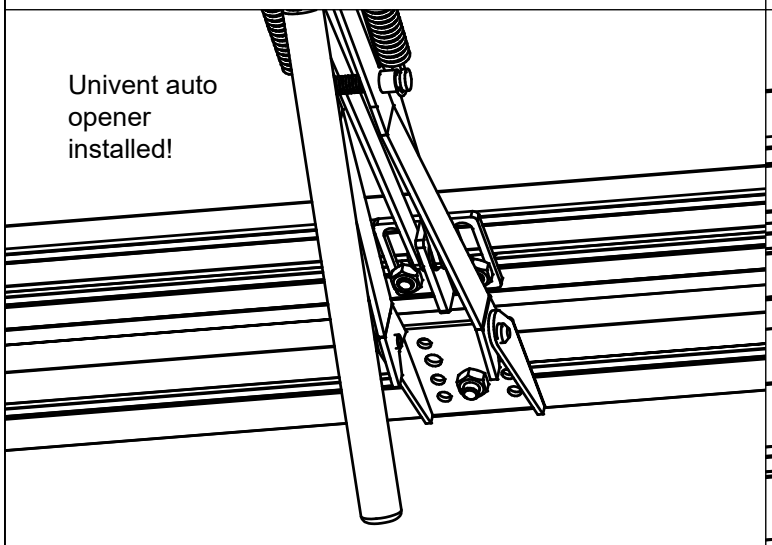


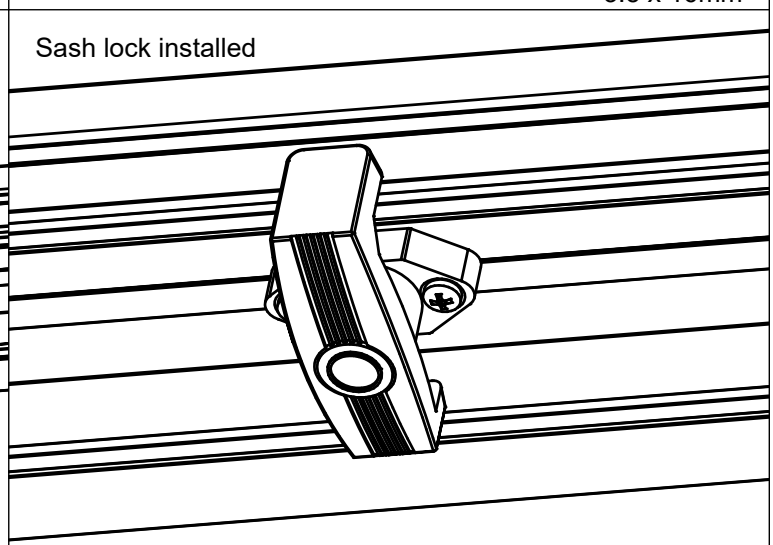
Window opener must be installed parallel to the window. See next pages for detail.

Sash lock is for wind protection only! If you latch the sash lock you MUST use the quick release on your auto opener or your piston will burst. This is not covered under warranty. See next pages for details.







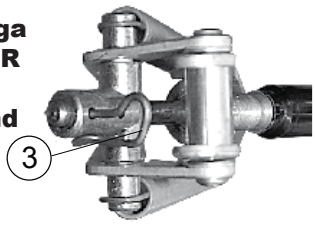


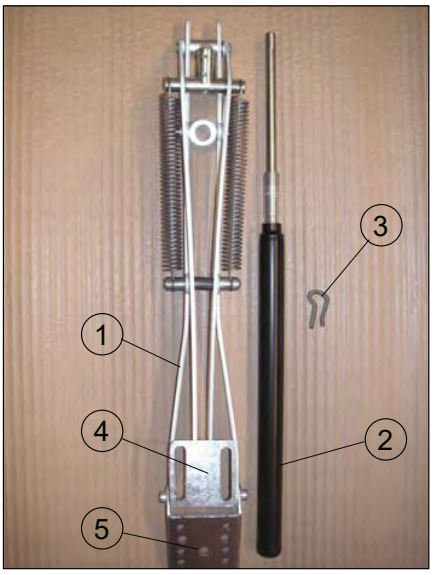
ZS-N

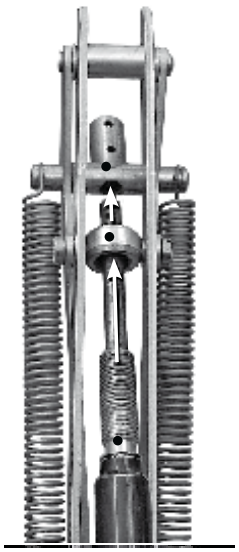
Automatic Window Opener

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

Check out our YouTube Riga greenhouse playlist (see QR code on cover) for a video on installing the opener and other helpful videos.







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). 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).

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:

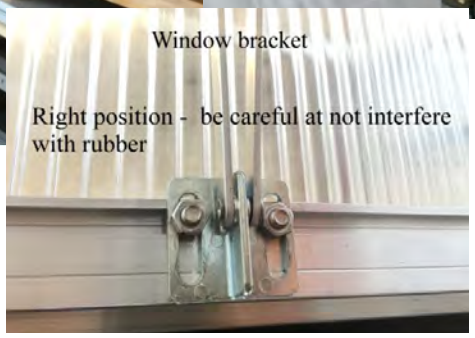
When the temperature decreases and the window is no longer to be opened, or when a source of heat is used in the greenhouse:
1. Unscrew the cylinder from the cylinder housing. The cylinder is now hanging from the cotter pin and cannot open the window. The cylinder can be left hanging in this position 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 piston from EXACO.
2. Use a sash lock or the red strap to lock the window shut for the winter so it cannot blow open.

Required Maintenance:

Every 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

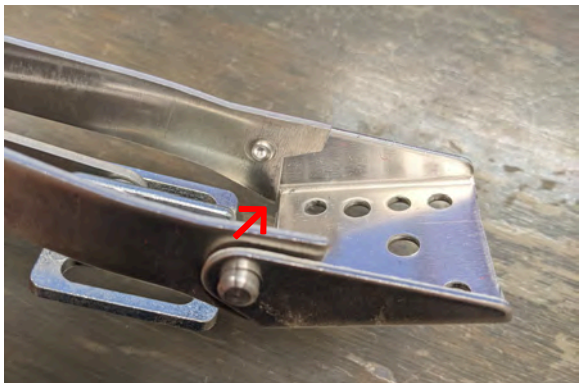
In the correct position, the opener is sitting parallel to the window, which means that it will not demand a lot of pressure from the cylinder when the opening starts. Before fitting a new cylinder to the openers, you must check that the window can open freely right from the start. If not you must change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



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

Auto Opener and Piston Troubleshooting:

How does the auto opener and piston work?
The black piston cylinder is filled with a mix of oils that naturally expand around 73 degrees. As the oil expands, it will begin to push out the rod of the piston and open your window. The springs and the weight of the window will pull it shut when the temperature drops. Please note that if the piston is not in the opener assembly, it will not retract on its own (it is the pressure of the springs which cause the retraction).

Here's a few things to check for on the pistons:

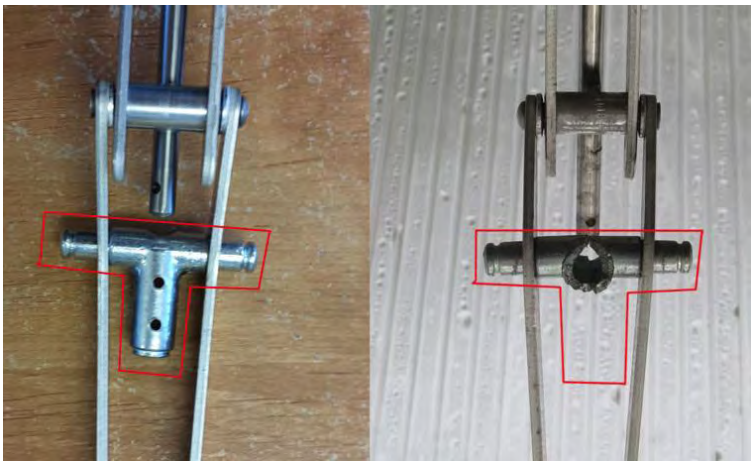
Is the piston moving at all? To test, remove the piston and place in ice water for 15 minutes, push the rod in and measure the length. Place in hot water for 15 minutes (above 90 degrees). Measure the distance – did the rod push out? If so, your piston is working.

Does the piston rod move in and out smoothly? The manufacturer recommends oiling them regularly (2 to 3 times/year) with a light oil such as olive oil or WD40. Sometimes oiling them will help get them moving if they are stuck.

Were the pistons ever under pressure? If the opener and piston are attached while there was a weight or lock/sash lock holding the window shut, the piston can burst open and release the paraffin oil inside. This can also happen if they are stored in a tight container that doesn't have enough room for them to expand. If a piston has burst, this is usually evident by visible oil, a gash in the side of the piston – or the rubber stopper in the end might have popped out.

Does everything look intact on your opener?

- There is a cast metal T piece that occasionally breaks – see pictures to the right.
- Sometimes the arms of the opener are "torn" or twisted. This can happen when a huge wind gusts pulls the window further than the opener can handle (can be prevented with wind cables) OR someone thought the opener was a handle to open the window and has pulled on the piston to try to open the window.



If you are installing in a Riga greenhouse, please check the angle at which the actual opener is installed. See the next page regarding the opener installation in a Riga greenhouse. If installed incorrectly, pressure builds in the piston and can make it difficult to open the vent. This can also make pressure build up in the piston until the window suddenly "pops" open – or if you slightly push the window it opens suddenly.

If you are unsure of any of the above, a photo can help us diagnose the issue. Please send us photos of your opener installed with the piston threaded into the holder. Also include a photos of the imprint near the end of piston, which will have the manufacturer's name and a date stamped into the black sleeve. We need this to file a warranty claim with the manufacturer and replace your piston.

How does the Cylinder warranty work?

1) Coverage

Your cylinder is covered for 3 years from the year that is stamped on the cylinder.

2) How to test if your cylinder is defective or not?

1) Prepare a bucket of hot water and a bucket of cold water.
2) Put the cylinder in the bucket of cold water for around 10 minutes and then push the piston pin in as far as it will go.
3) Then put the cylinder in the bucket of warm water. Observe if the piston pin comes out (it can take around 10 minutes before something will happen). If the piston pin doesn't come out by approximately 8 cm then it means that the cylinder is defective and you can take advantage of your warranty.

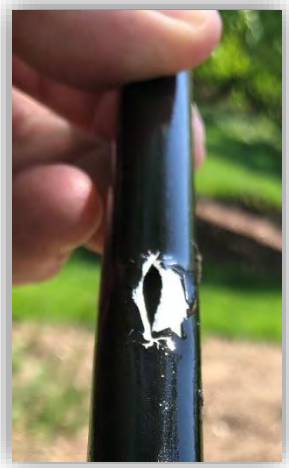
3) Leaking cylinder?

Is covered during the warranty period.

4) Cracked cylinder?

An overloaded cylinder as a result of a window that is too heavy is normally not covered by the warranty. Individual treatment each time. See example to the right.

NB the cylinder can also be overloaded due to incorrect installation. See our installation videos on www.orbesenteknik.com for the correct installation procedure.



5) Should you send the damaged cylinder back to us?

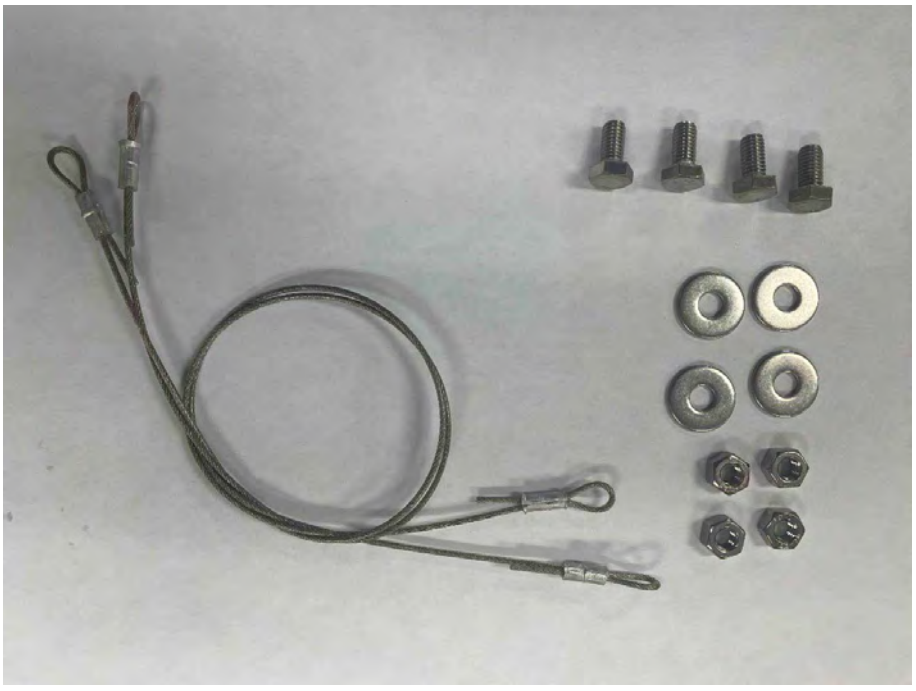
No, we only need you to send us a picture, of the cylinder where we can see the mark "ORBESEN TEKNIK and YEAR" on the cylinder, along with the damage and an explanation of occurred. Please include your customer's address so that in a case of warranty coverage we can send a new cylinder. www.orbesenteknik.com

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 between two flat washers on screws inserted into the channel. Position the restraint as illustrated and adjust as needed to avoid interference from the crossbar as the window is raised and lowered.

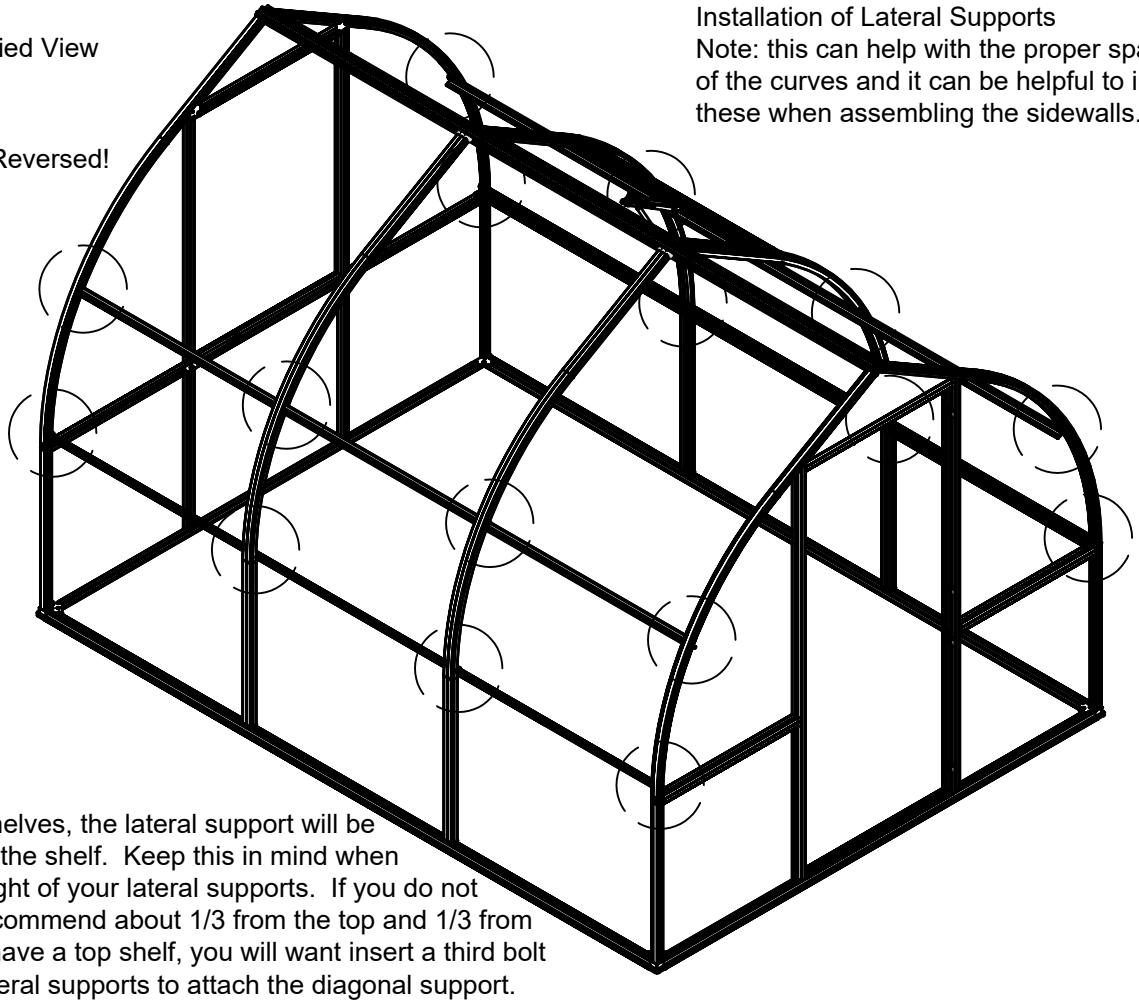
You can make your own restraints from 1/16 "stainless wire rope, stranded 7x19 for maximum flexibility. Overall length should be about 16". When installed near the crossbar, they will limit the window opening to less than the safe extents of the hinge and window opener, but greater than the maximum thermal 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.



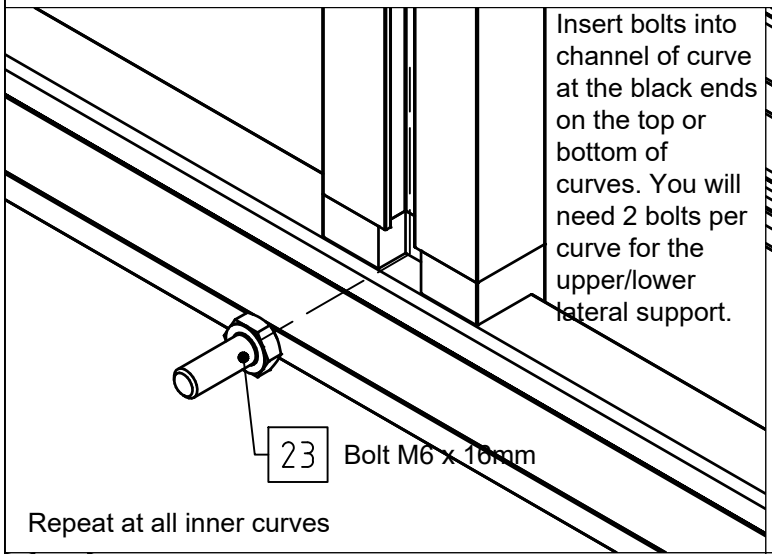
VD Simplified View

View Reversed!

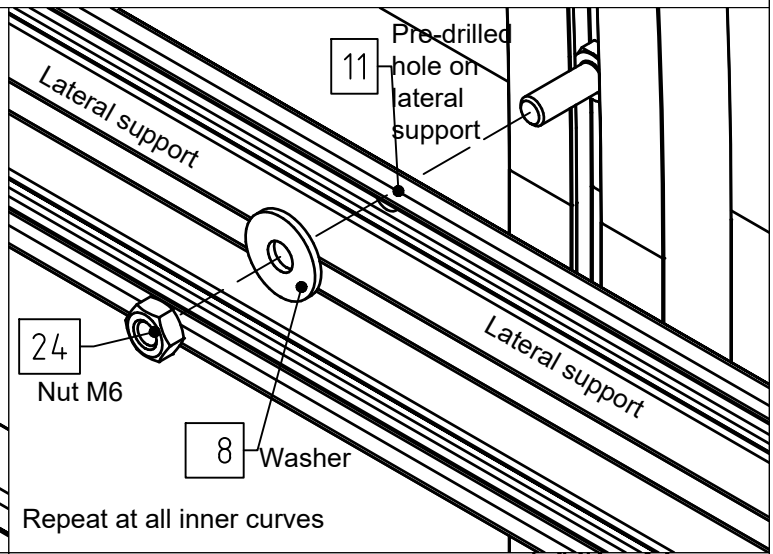
Installation of Lateral Supports
Note: this can help with the proper spacing of the curves and it can be helpful to install these when assembling the sidewalls.



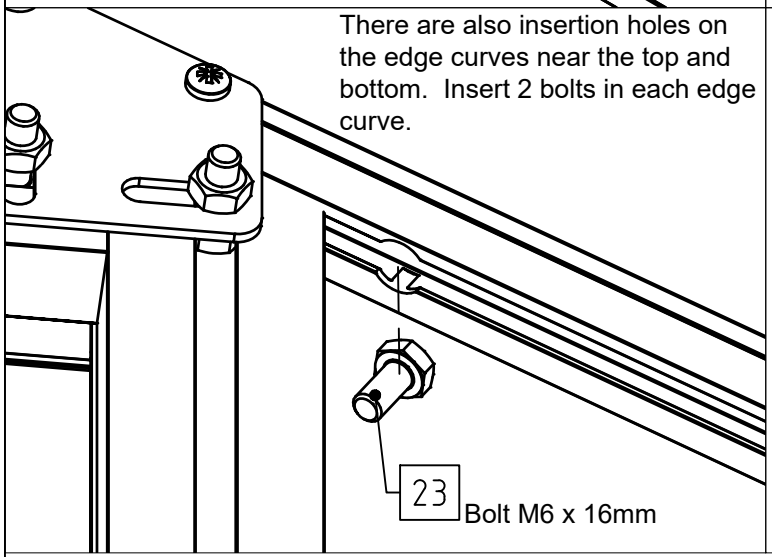
Note: If you have shelves, the lateral support will be the back support of the shelf. Keep this in mind when determining the height of your lateral supports. If you do not have a shelf, we recommend about 1/3 from the top and 1/3 from the bottom. If you have a top shelf, you will want insert a third bolt between the two lateral supports to attach the diagonal support.

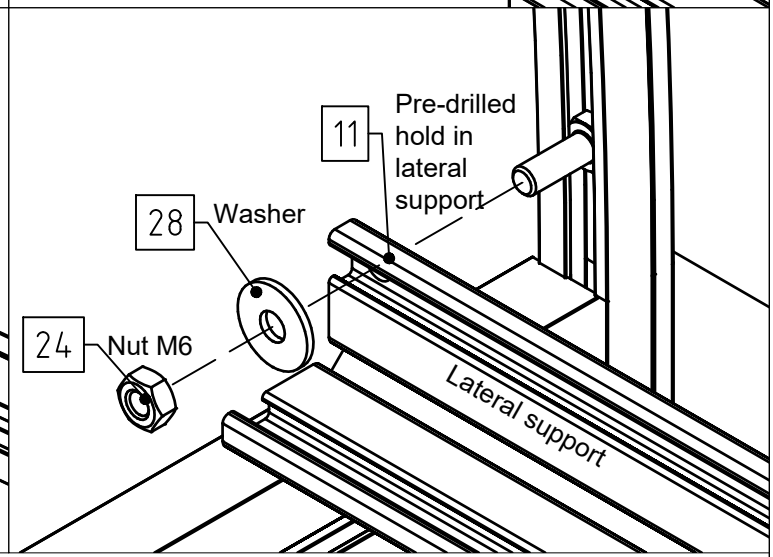


Repeat at all inner curves

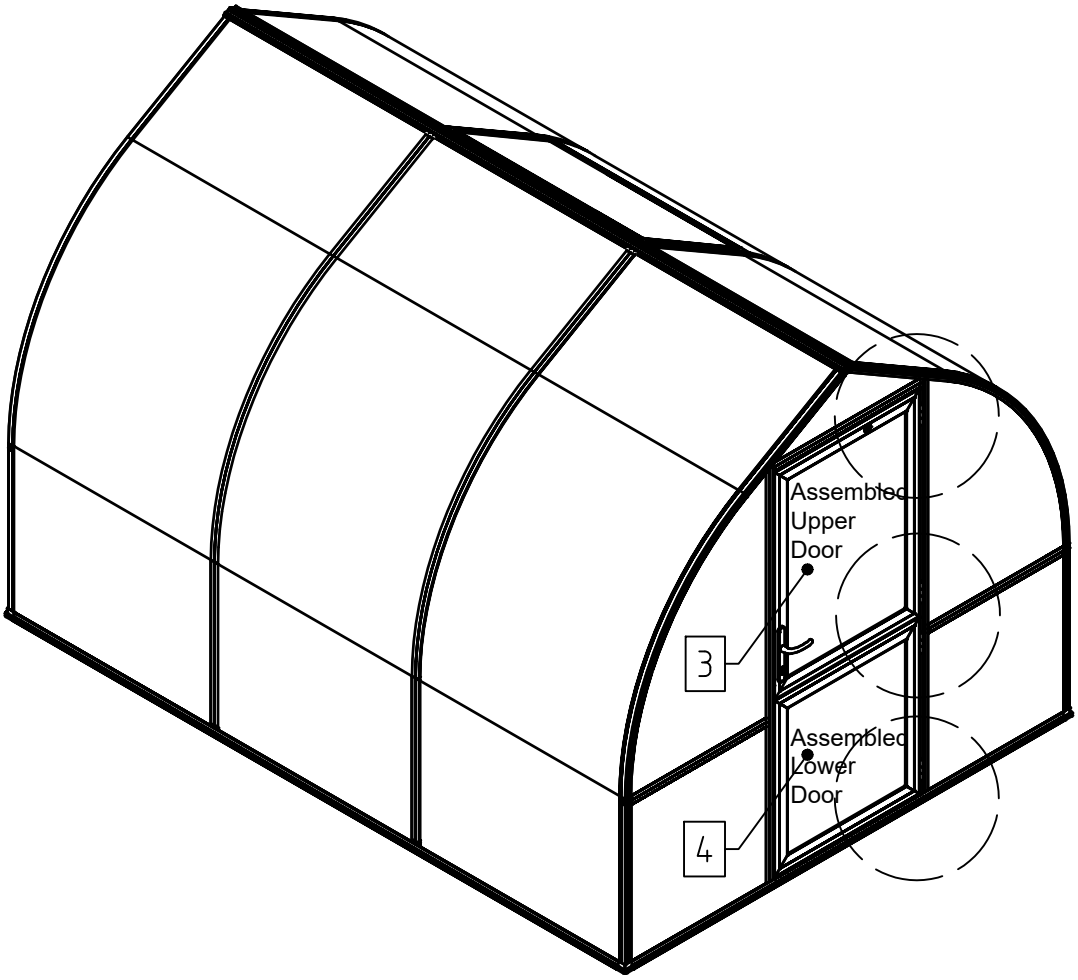


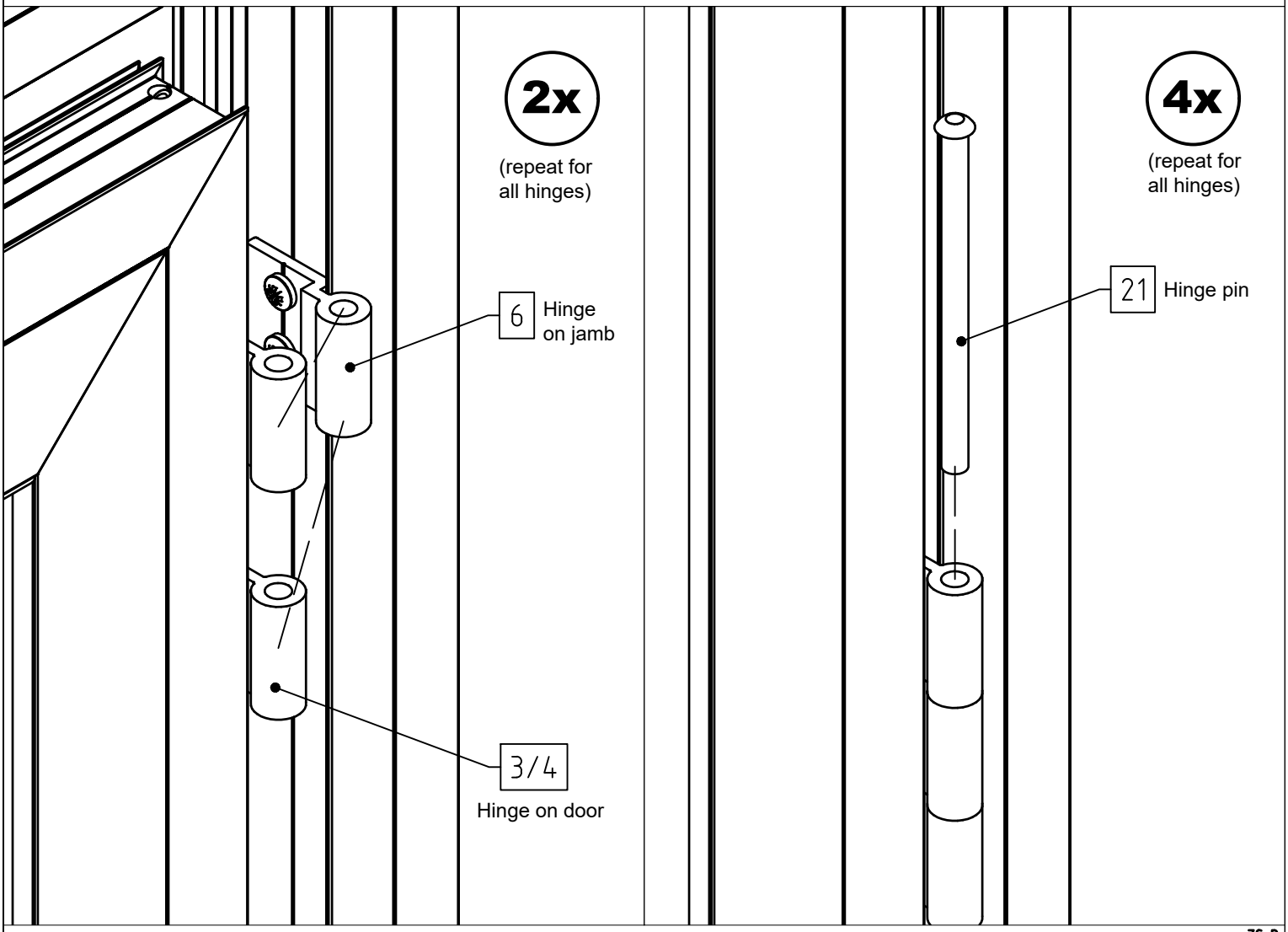
Repeat at all inner curves

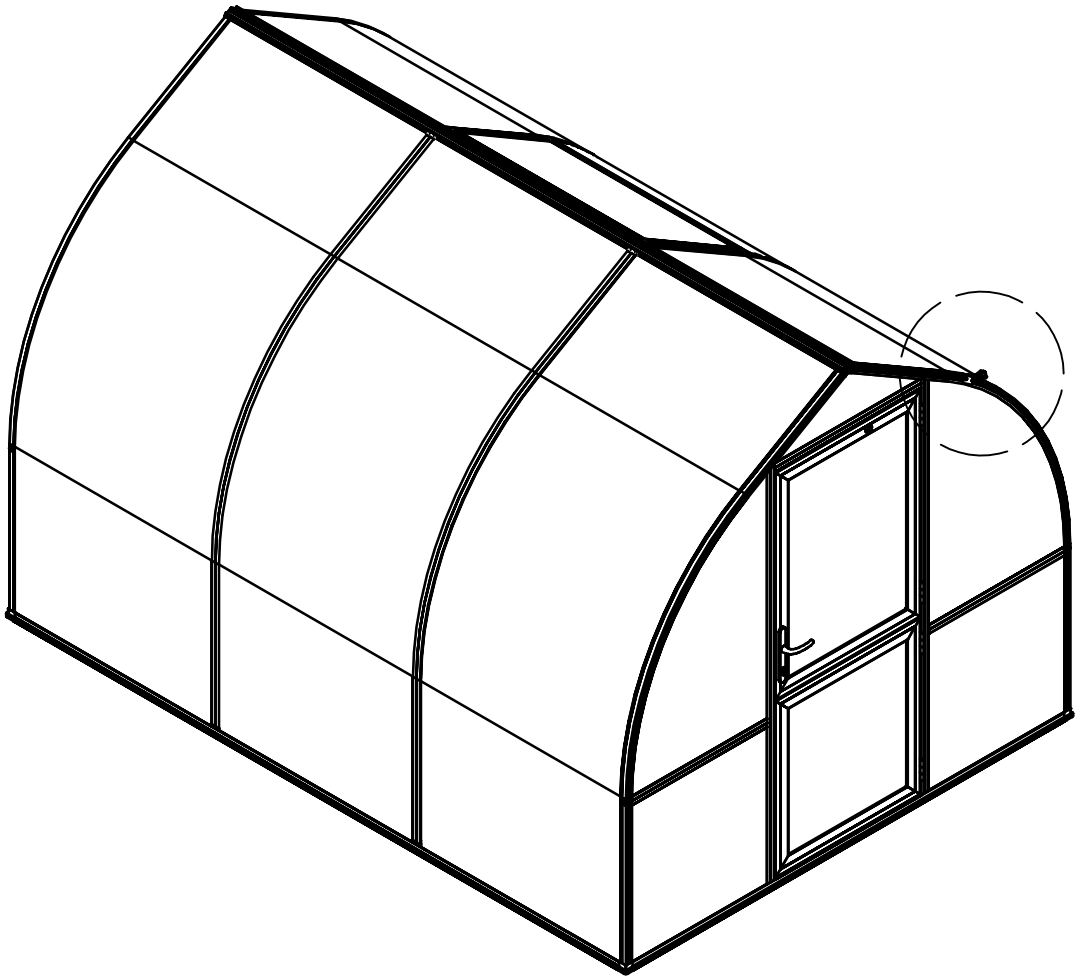




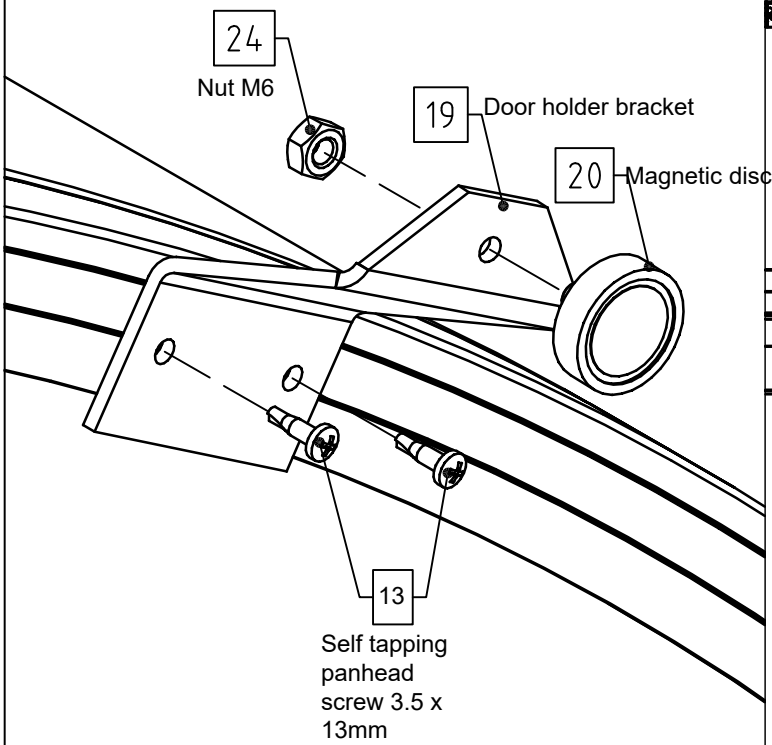
ZS-0

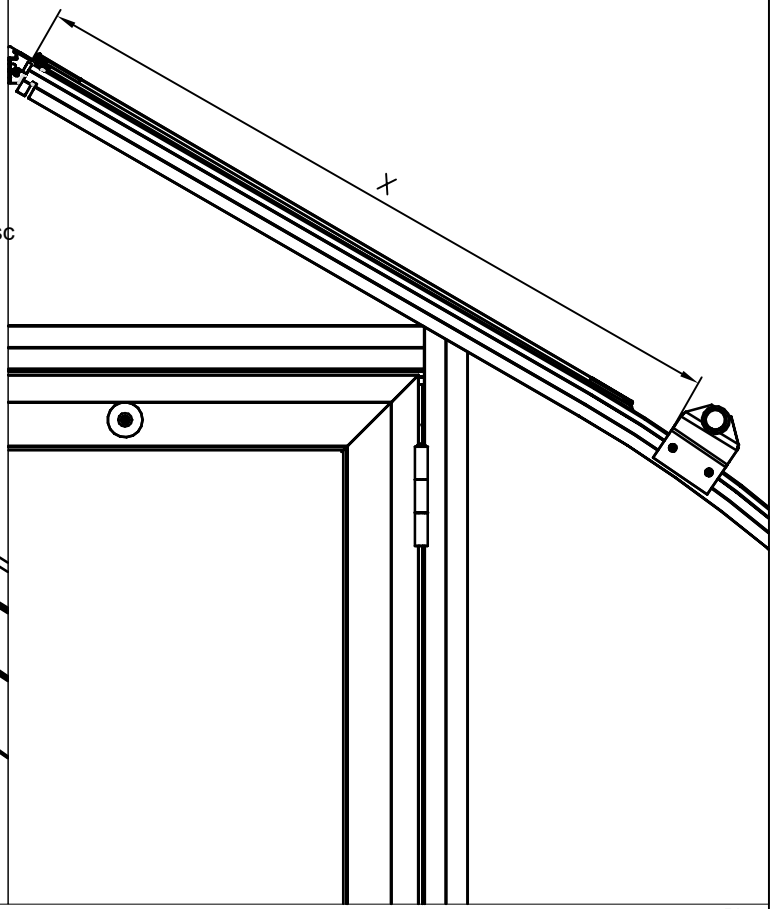

Assembled
Upper
Door
3
Assembled
Lower
Door
4


2x
(repeat for
all hinges)
6
Hinge
on jamb
3/4
Hinge on door
4x
(repeat for
all hinges)
21
Hinge pin



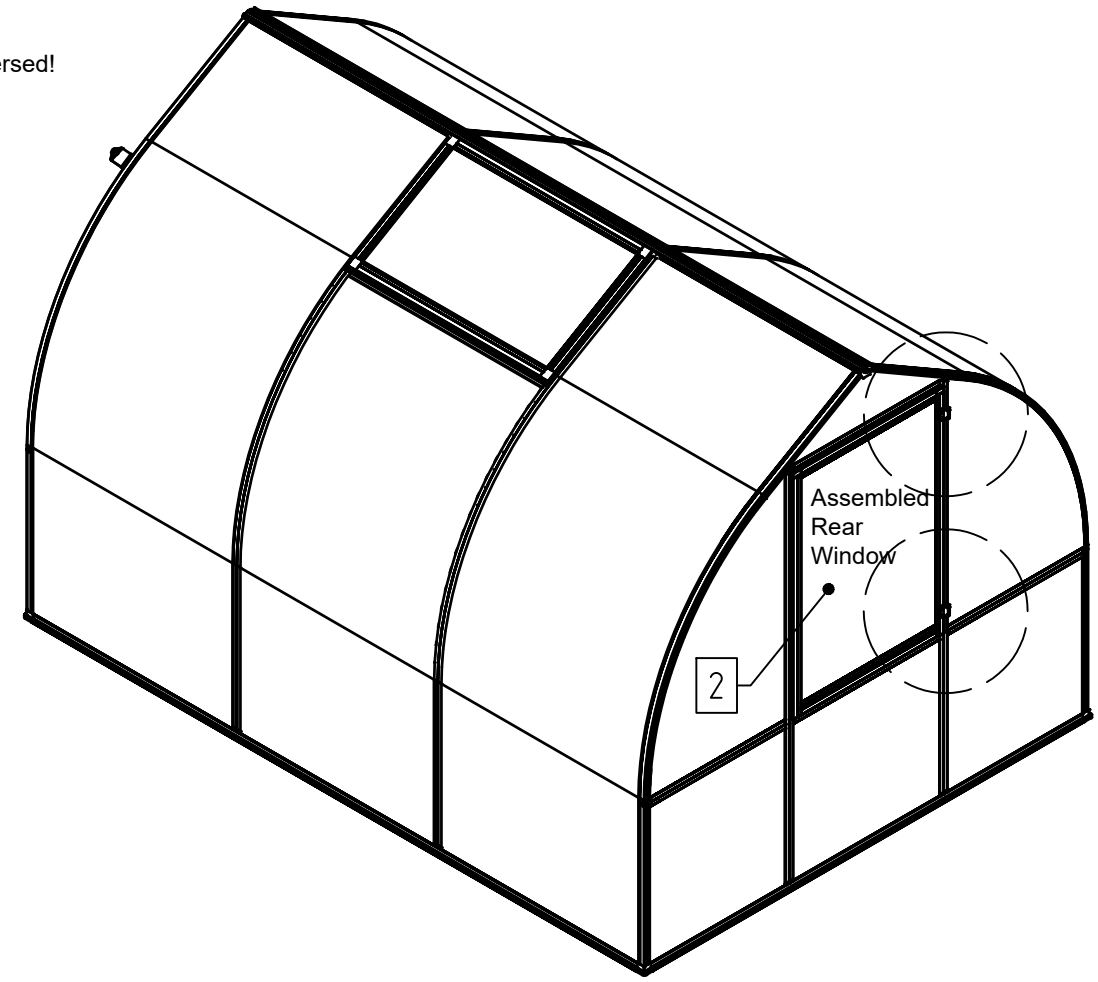
NOTE: No holes are drilled for the magnet door holder. You may need to adjust position based on your site/greenhouse. Attach metal disc to door to line up with magnet.

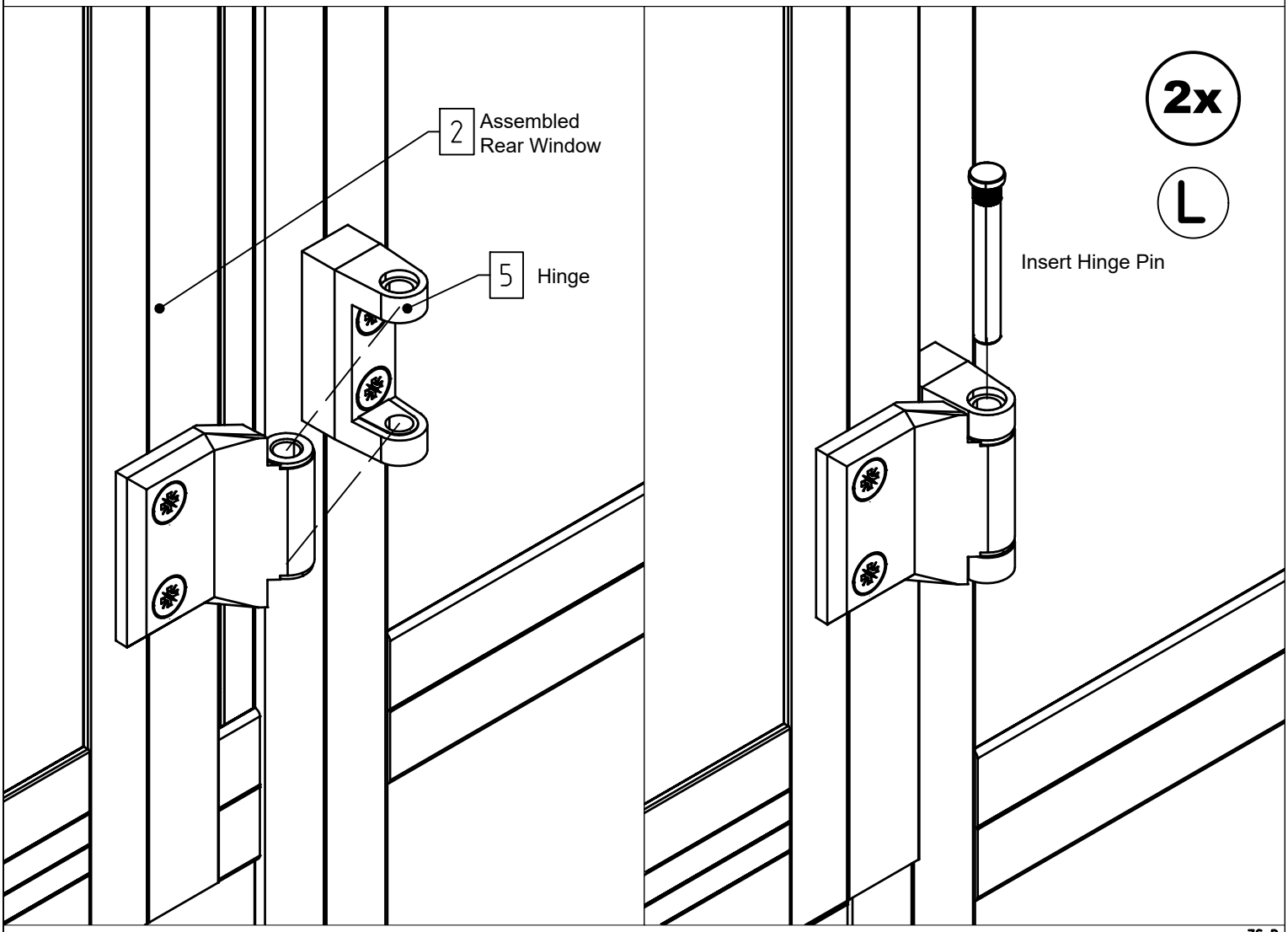




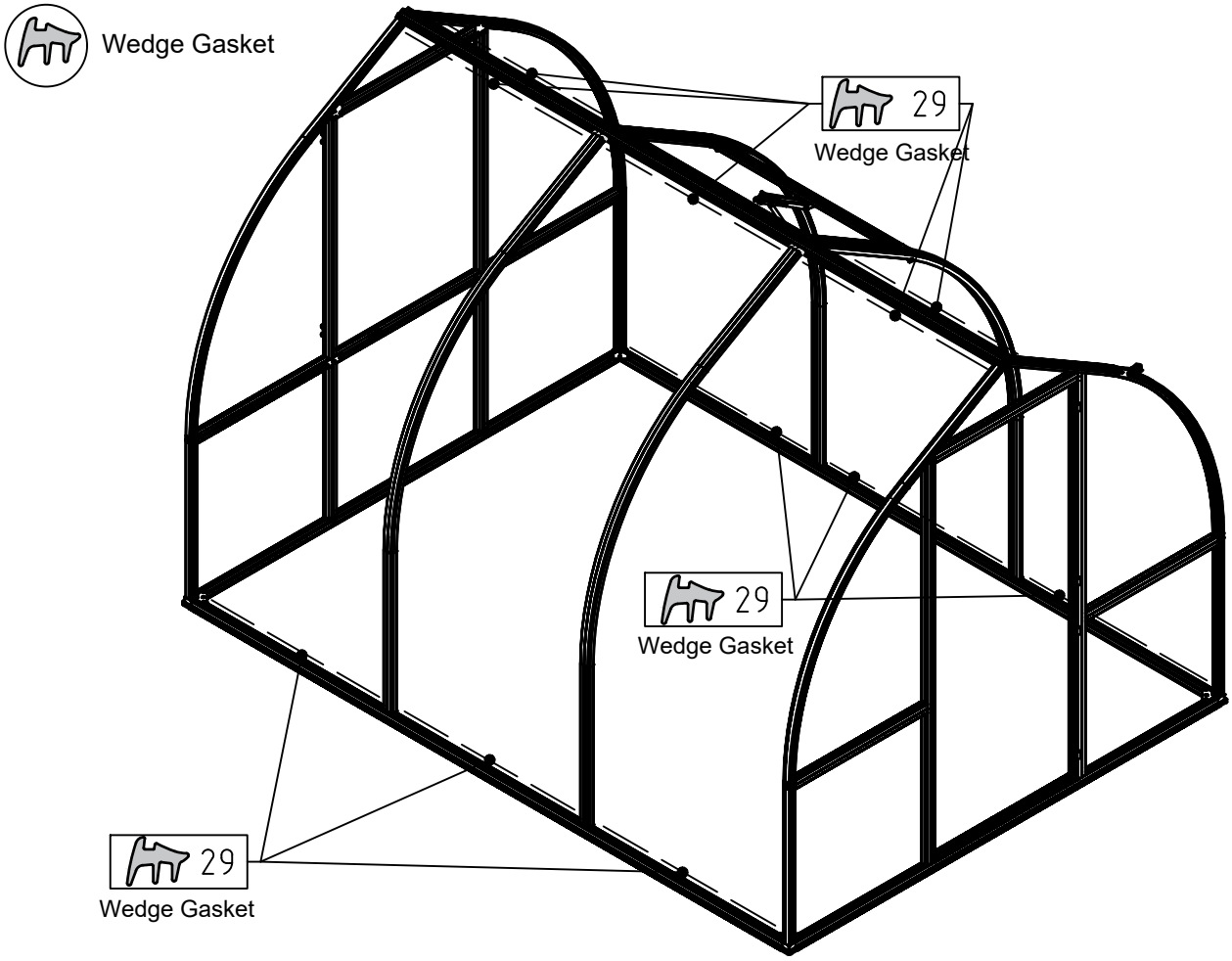
ZS-Q

View Reversed!



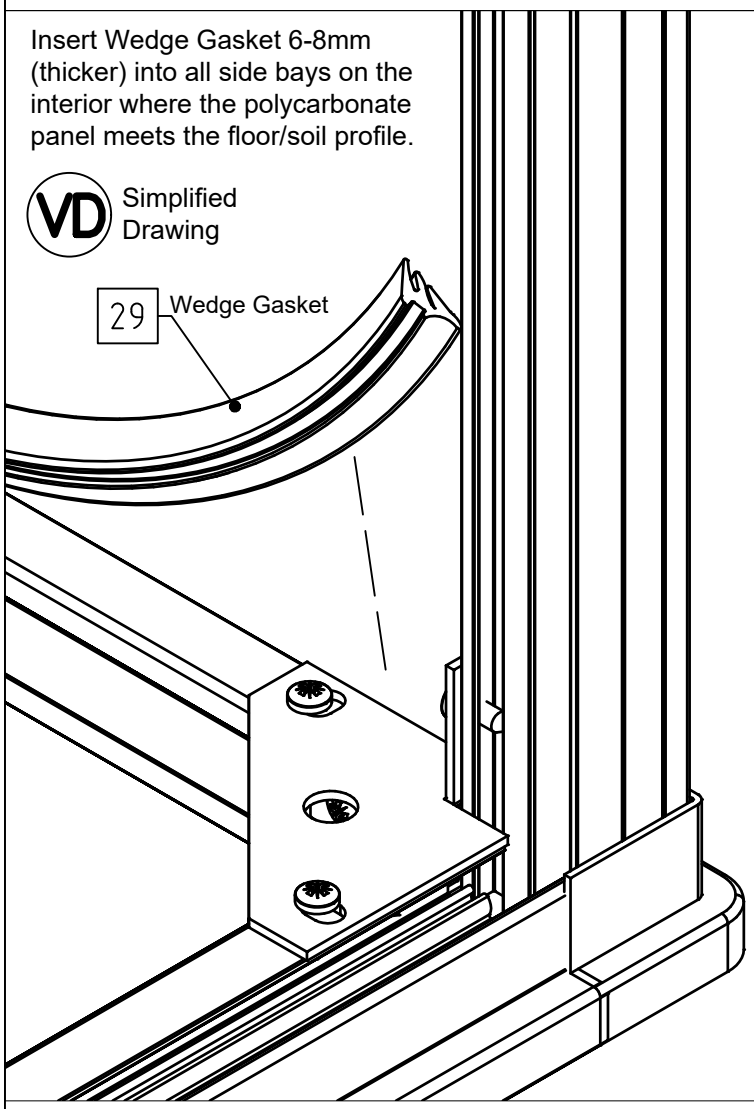


ZS-R

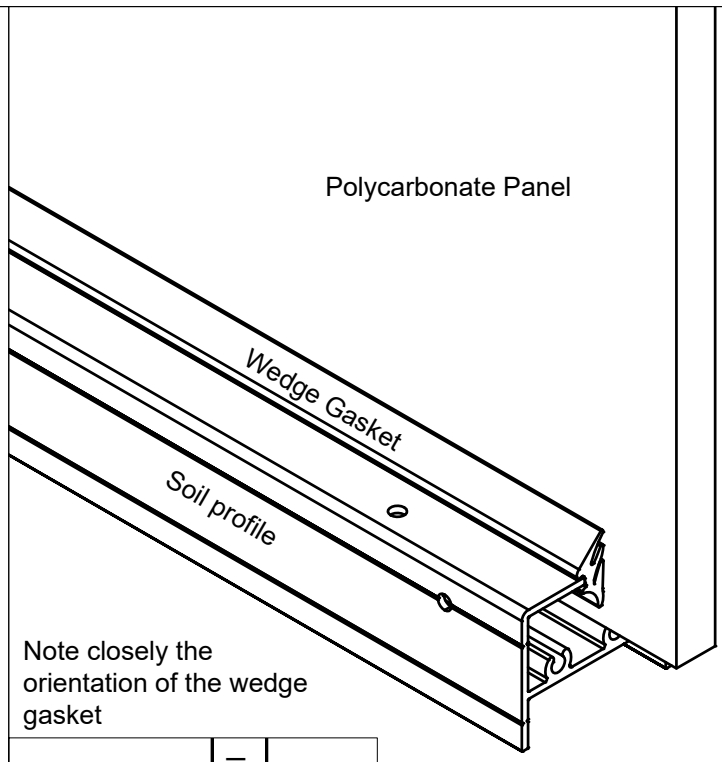


Insert Wedge Gasket 6-8mm (thicker) into all side bays on the interior where the polycarbonate panel meets the floor/soil profile.

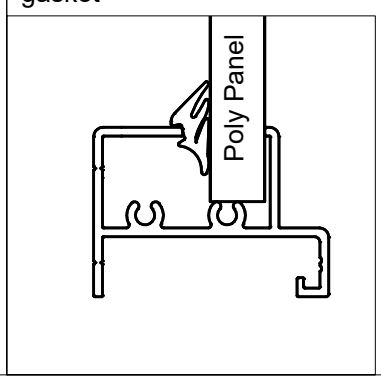
VD Simplified Drawing



Polycarbonate Panel



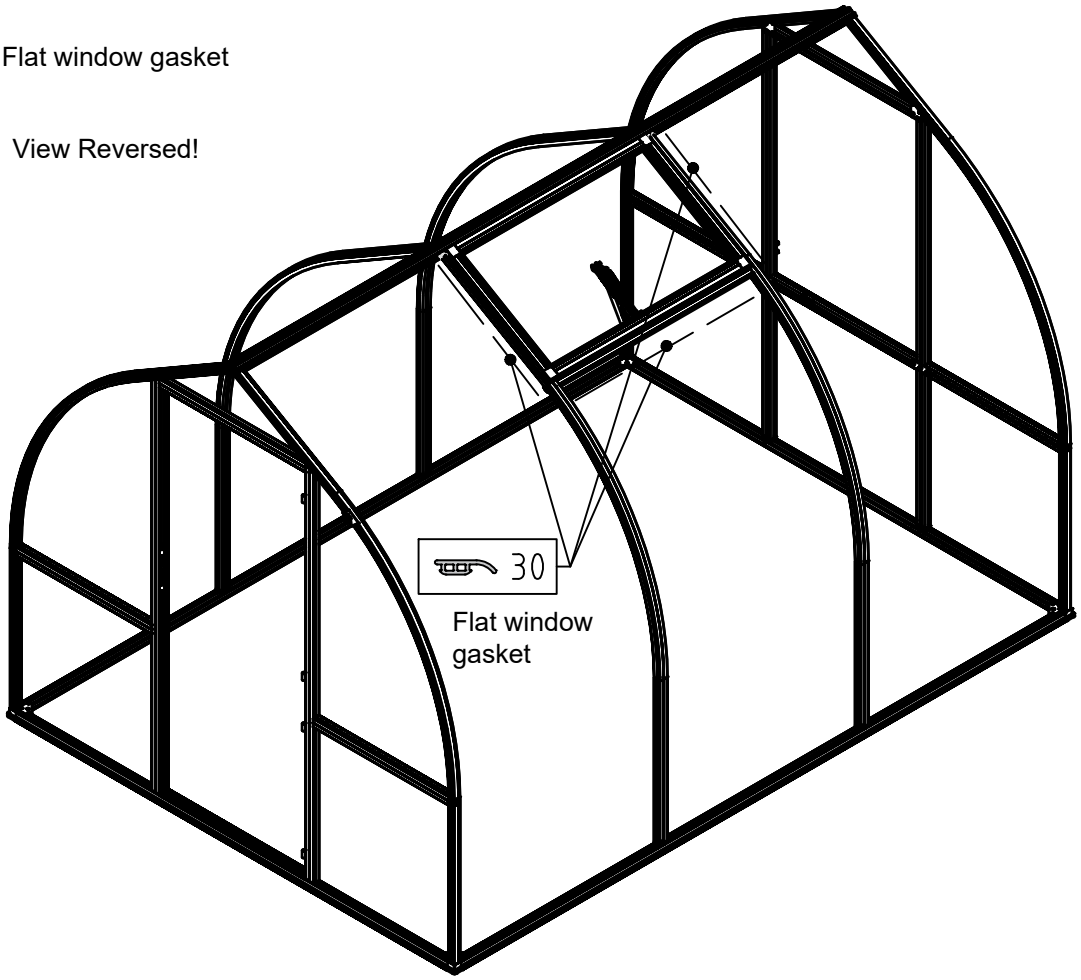
Note closely the orientation of the wedge gasket



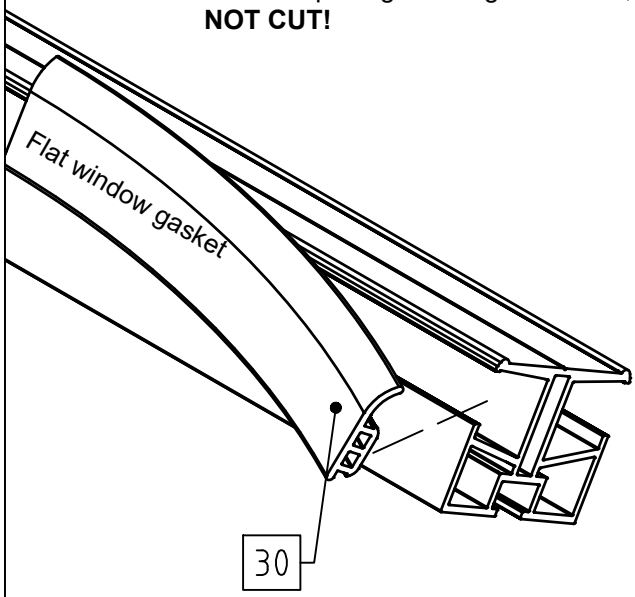
Simplified Drawing

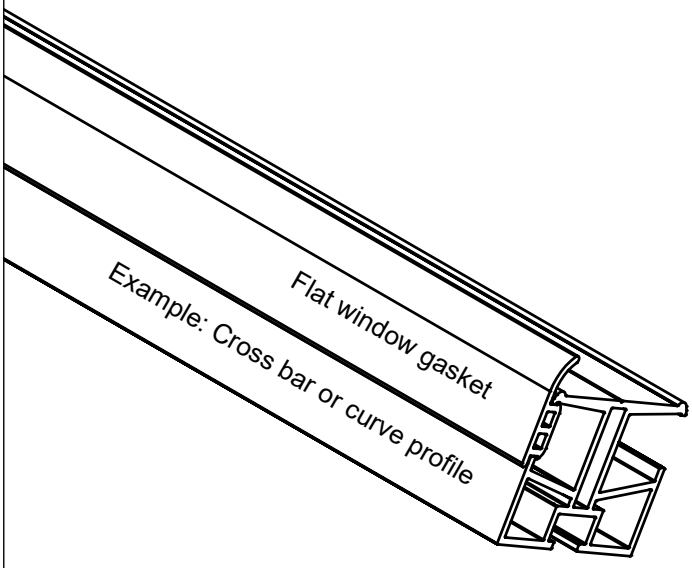
Flat window gasket

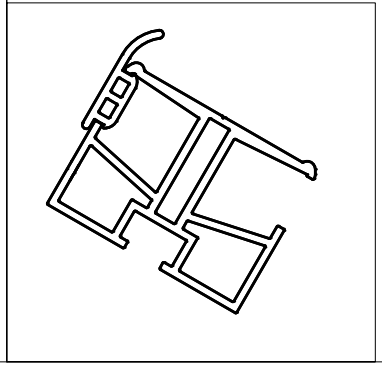
View Reversed!



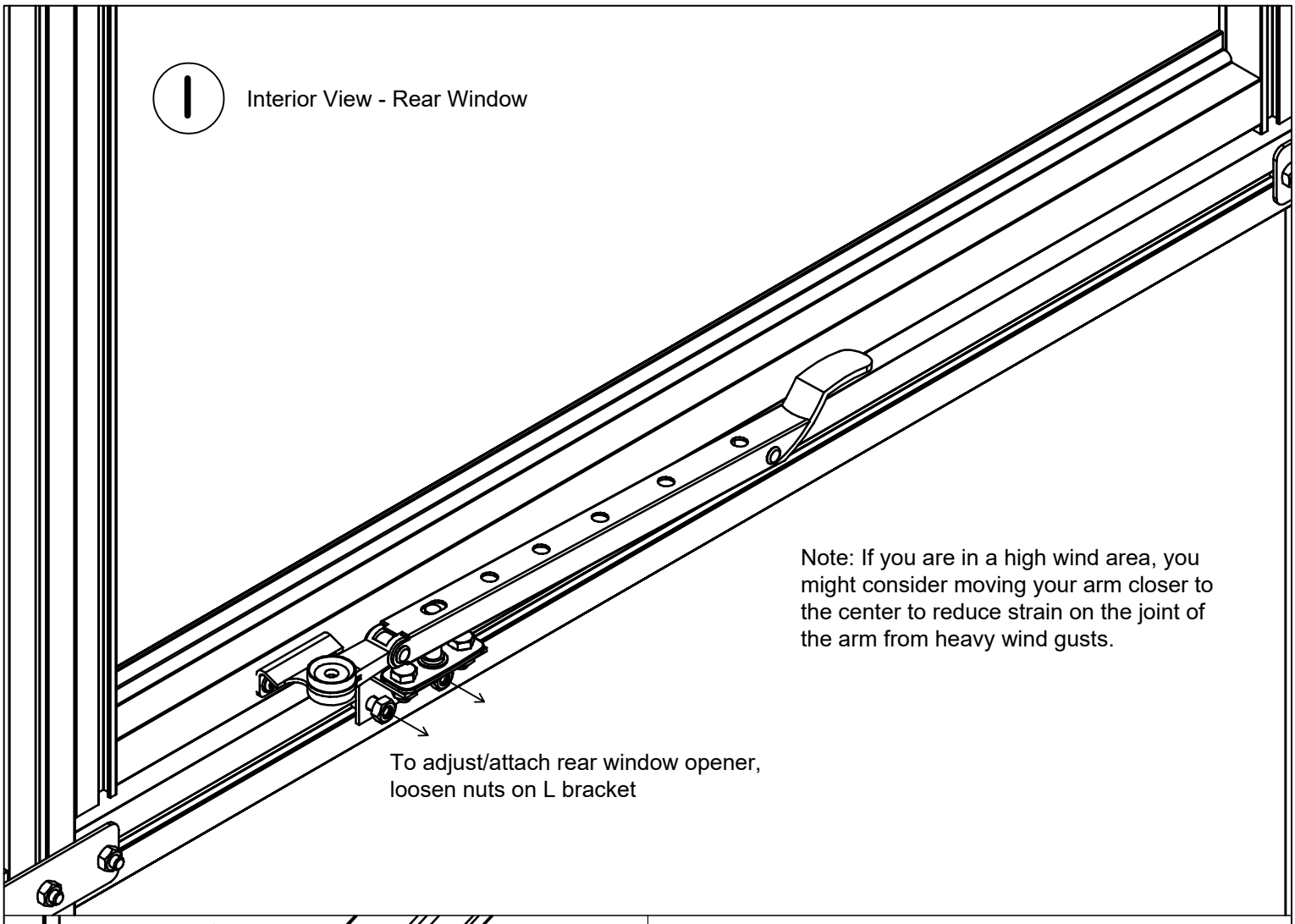
Insert the seal in one piece around each window opening on the greenhouse, **DO NOT CUT!**

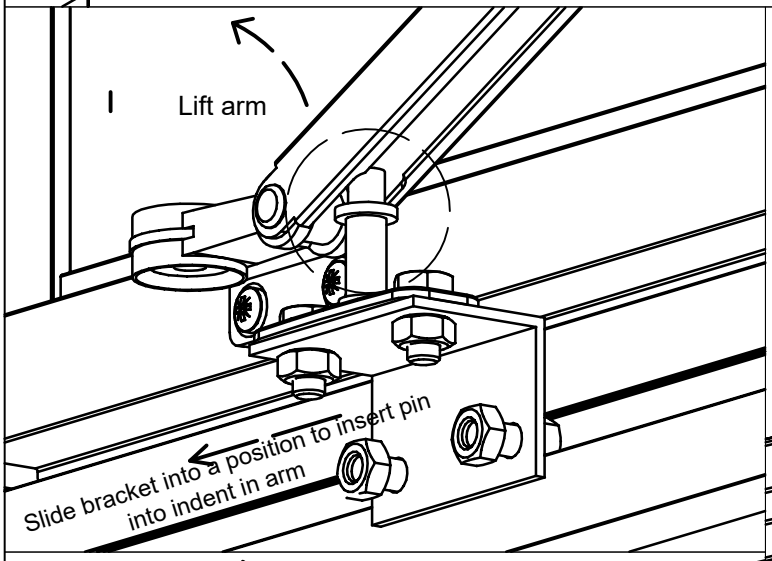


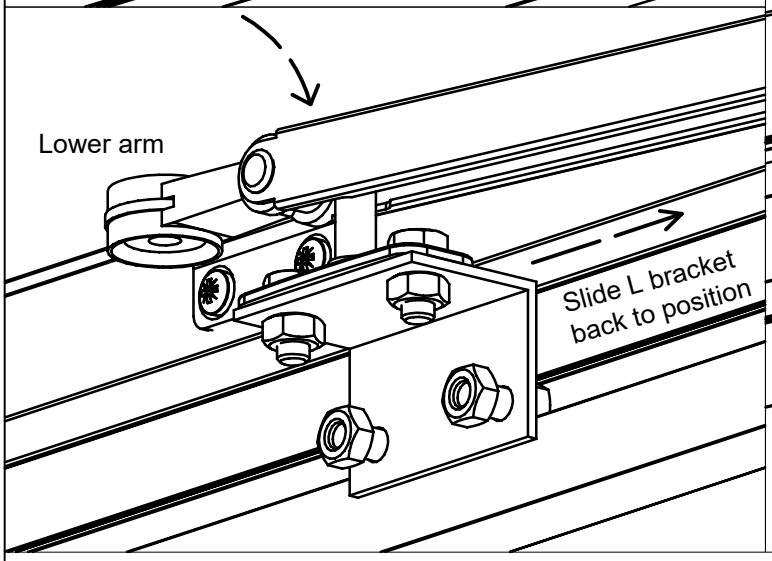


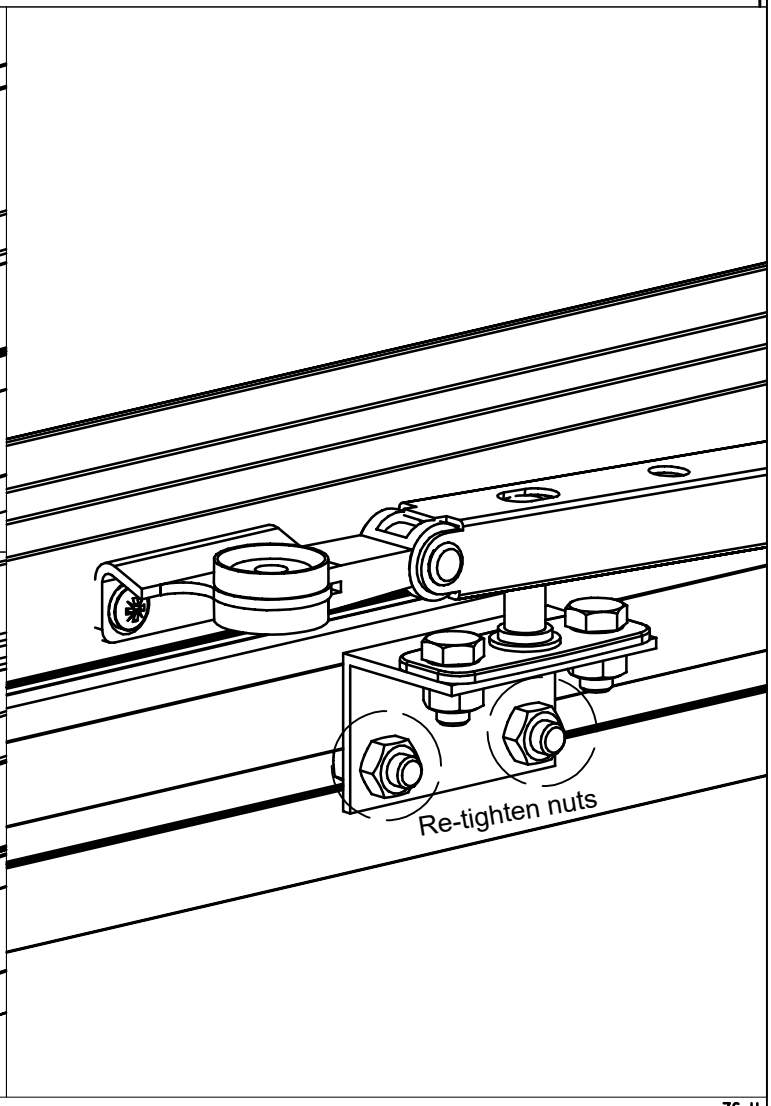


Repeat on all window openings.


1
Interior View - Rear Window
Note: If you are in a high wind area, you might consider moving your arm closer to the center to reduce strain on the joint of the arm from heavy wind gusts.
To adjust/attach rear window opener, loosen nuts on L bracket


1
Lift arm
Slide bracket into a position to insert pin into indent in arm


Lower arm
Slide L bracket back to position

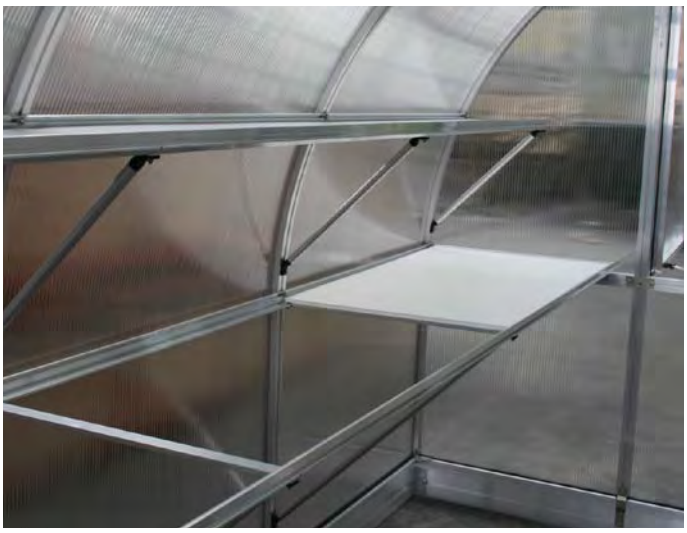

Re-tighten nuts

Please use this set of instructions

v.12.9.21

Optional Accessory

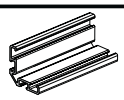
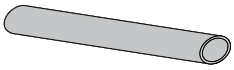
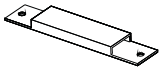
Riga/Riga S



Top Shelf Assembly Instructions

Shelf assembly animation is available at the end of our Riga Greenhouse assembly video on our Exaco You Tube page.

Parts List for Top Shelf:

Description	pos.	overview	Riga II	Riga III/IIIS	Riga IV/IVS	Riga V/VS
longitudinal profile	1		2	2	3	4
strut (Ø20 x 1,5) - 32 inches	3		3	4	5	6
angle-end tail (narrow)	V36		6	8	10	12
cross-brace	5		3	4	5	6
connector with grub screw	V161		2	2	4	6
hexagonal screw M6 x 12 with nut M6	S12/ S1		3	4	5	6
hexagonal screw M6 x 16 with nut M6	S5/ S1		3	4	5	6
T-head bolt M6 x 16 with nut M6	S15/ S1		3	4	5	6
Allen key	V21		1	1	1	1
Polycarbonate sheets (shelf surface) In a separate box			2	3	4	5

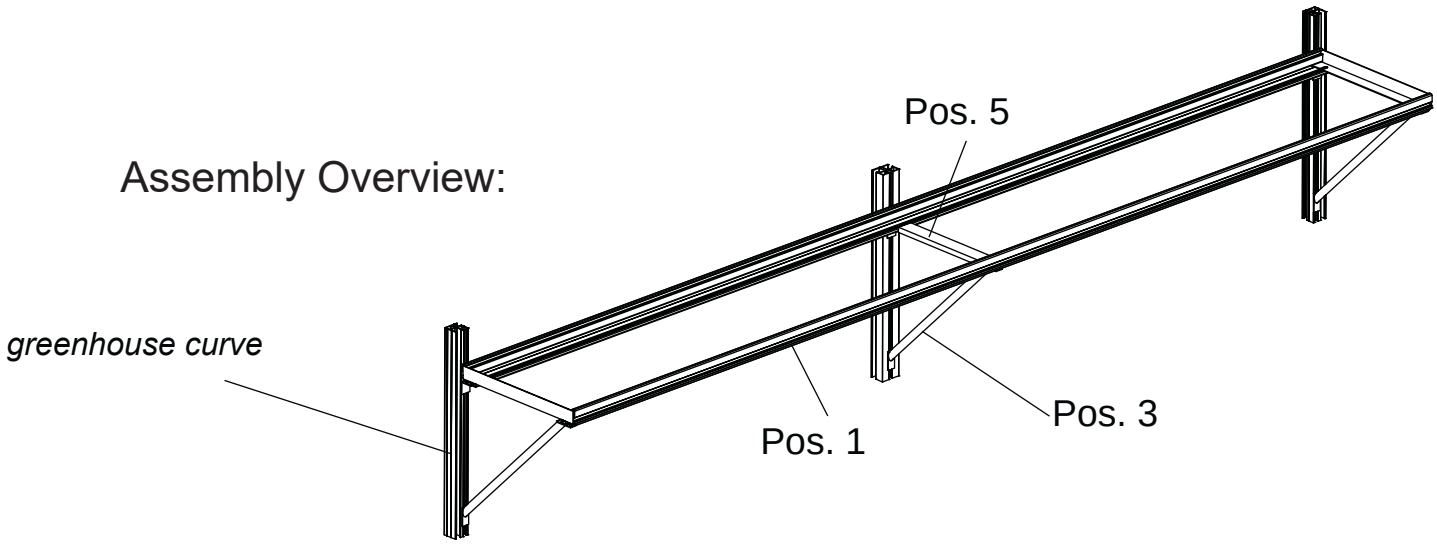
Before beginning step 1 of assembly, take time to prepare your longitudinal profile:

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.

Riga II	1x 2104 mm (82.8 inches)
Riga III	1x 3162 mm (124.5 inches)
Riga IV	1x 4220 mm (166.1 inches)
Riga V	1x 5278 mm (207.8 inches)

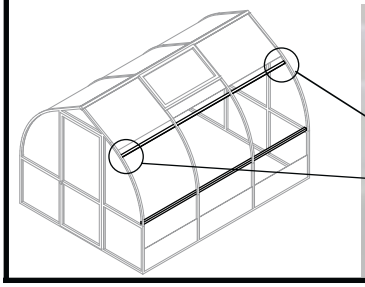
Assembly Overview:

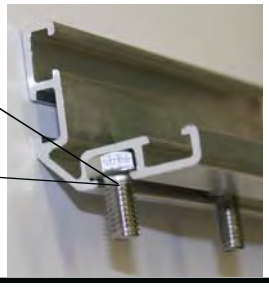


Step 1

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

Riga/Riga S

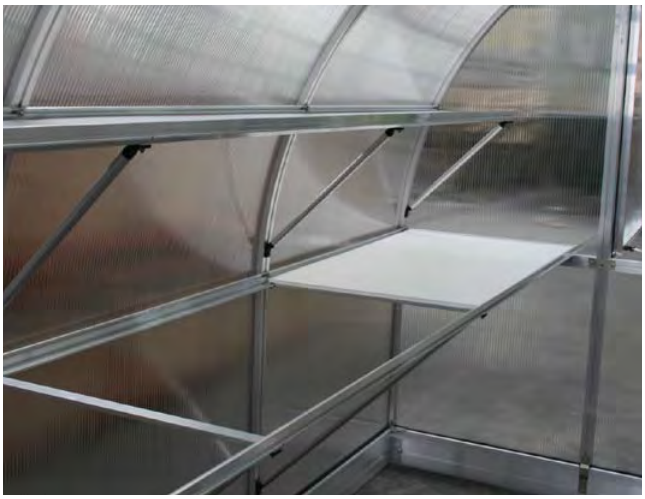
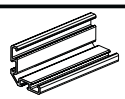
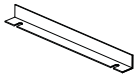
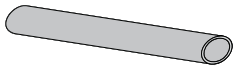
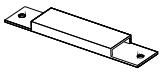


Table Shelf Assembly Instructions

Shelf assembly animation is available at the end of our Riga Greenhouse assembly video on our Exaco YouTube page.

Parts List for Table Shelf

Description	*pos.*	*overview*	Riga II	Riga III/IIIS	Riga IV/IVS	Riga V/VS
longitudinal profile	1		2	2	3	4
cross-*profile*	2		2	2	2	2
strut (Ø20 x 1,5) - 18 inches	3		1	2	3	4
angle-end tail (narrow)	V36		2	4	6	8
cross-brace	5		1	2	3	4
angle	6		2	2	2	2
connector with grub screw	V161		2	2	4	6
hexagonal screw M6 x 12 with nut M6 (Shorter screw)	S12/ S1		7	8	9	10
hexagonal screw M6 x 16 with nut M6 (Longer screw)	S5/ S1		2	4	6	8
T-head bolt M6 x 16 with nut M6	S15/ S1		2	2	2	2
Allen key	V21		1	1	1	1
Polycarbonate sheets (shelf surface) In a separate box			2	3	4	5

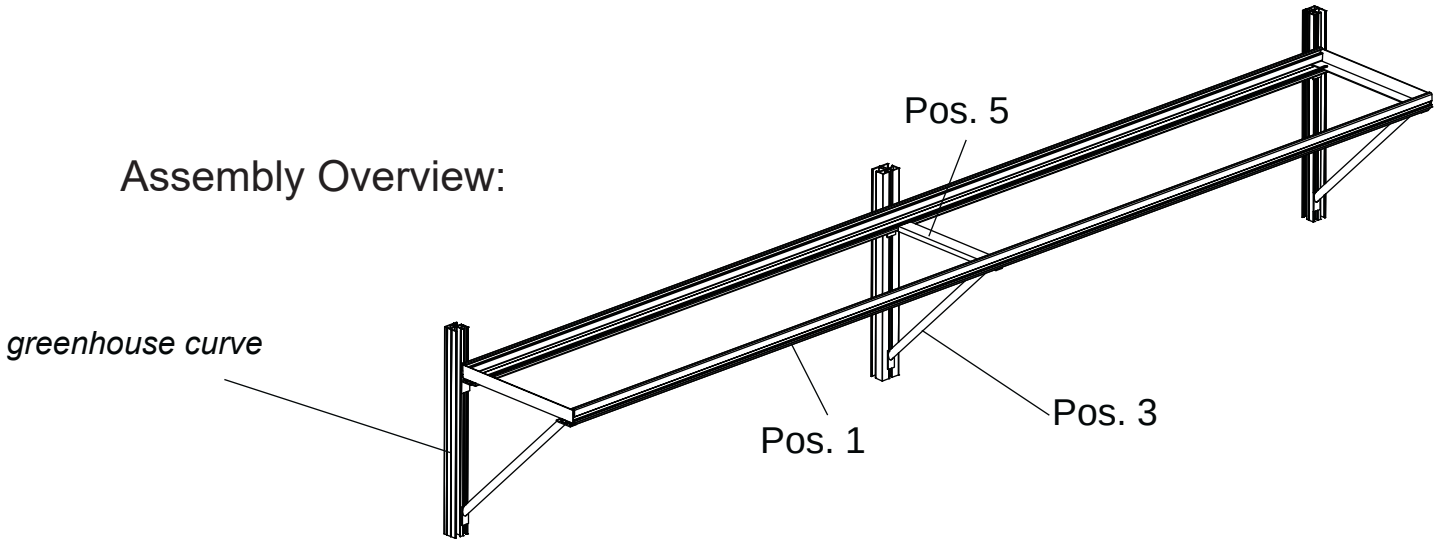
Before beginning step 1 of assembly, take time to prepare your longitudinal profile:

Connect your longitudinal profiles using connectors with grubscrews (may be pre-inserted 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.

Riga II	1x 2104 mm (82.8 inches)
Riga III	1x 3162 mm (124.5 inches)
Riga IV	1x 4220 mm (166.1 inches)
Riga V	1x 5278 mm (207.8 inches)

Assembly Overview:

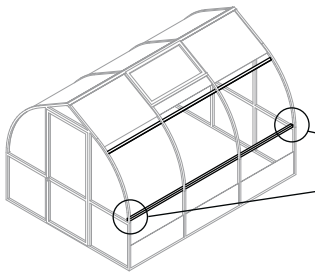


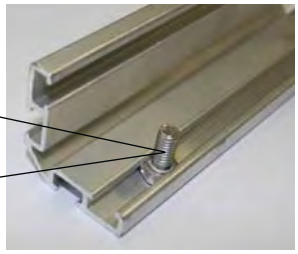
Riga Table Shelf Assembly

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 M6x12 bolt (pos S12) at each end of the greenhouse lateral support. These should be inserted into the lower inside channel of the lateral support as shown in picture.

Step 3

Lay the cross-profile (pos. 2) on top of the greenhouse lateral support and attach with supplied nuts (pos S1).

Step 4

Insert one M6 x 12 bolt (S12) per inner curve of the greenhouse into the outer bottom channel on the greenhouse lateral support (already attached to your greenhouse).

Step 5

Insert one bolt M6 x 16 (S5) per inner curve into lower channel on the outside of the shelf longitudinal profile (pos 1). Insert one M6 x 12 bolt (S12) at each end for the angles (pos. 6). Tip: Use tape to prevent bolt from sliding out while handling.

Step 6

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

B. Rest ends of assembled longitudinal profile (pos 1) on the greenhouse gable crossbar. Then, starting at centermost curve, attach crossbrace to bolt in longitudinal profile (pos 1), attach strut assembly beneath and tighten with nut. Repeat at all inner curves.

Step 7

Use the T-head bolts (S15) to attach angle (pos 6) to greenhouse gable crossbar.

Step 8

Attach strut to greenhouse curve with bolt M6 x 16 (S5) and nut (S1). Use insertion point at black curve endcap to insert bolt heads into channel of the curve.

Step 9

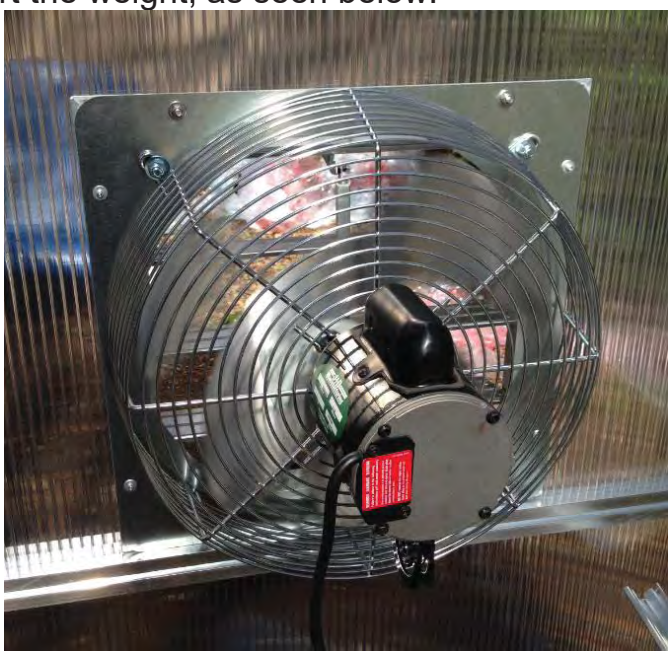
Finally, insert the polycarbonate panels. At the gable ends, you may wish to trim around bolts/nuts that are holding the cross profile (pos. 2). Conversely, you may also just let the shelf rest on them.

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.



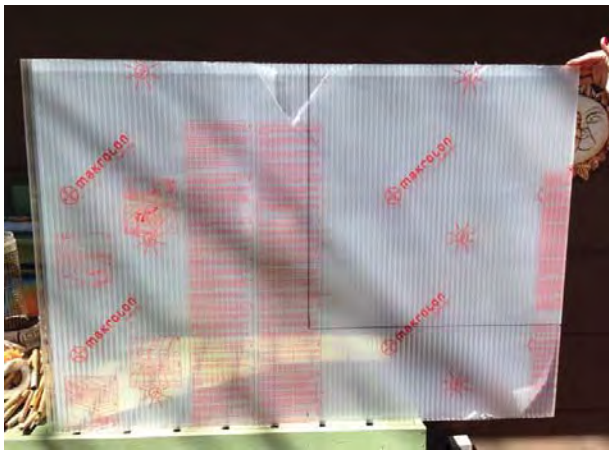
For the Riga XL the best placement is above the rear wall door with the weight on the door frame as seen to the left.

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.



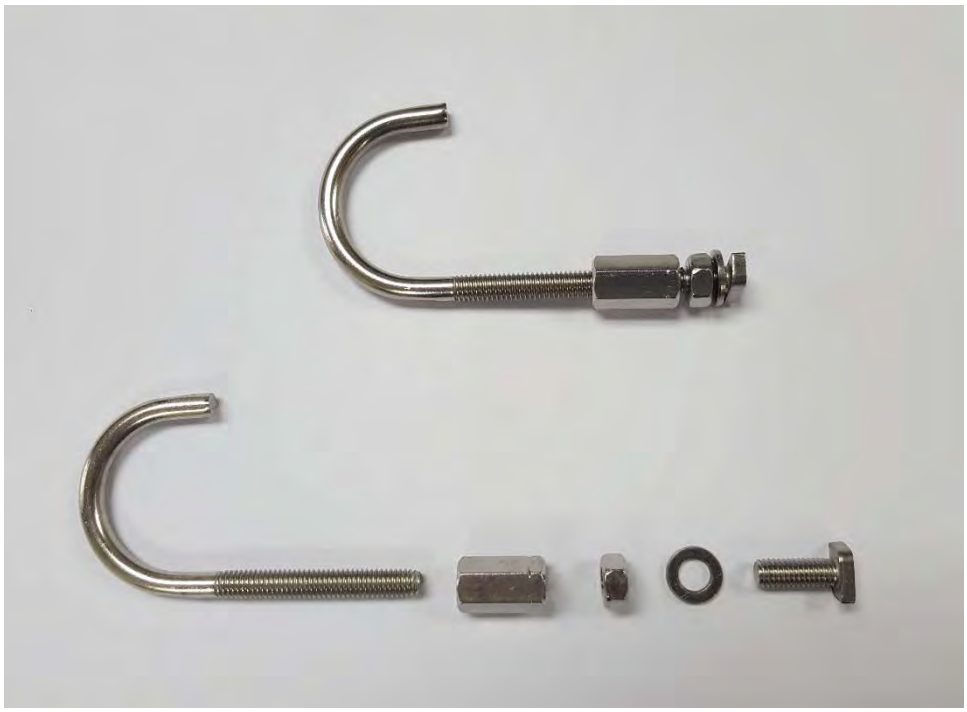
We recommend cutting a hole in the polycarbonate to bolt the intake shutter vent to the horizontal bar next to the front door. Measure the protruding dimensions and cut the appropriate size hole in the polycarbonate. You may cut this hole before installing the polycarbonate (see note to the right). If 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: 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



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