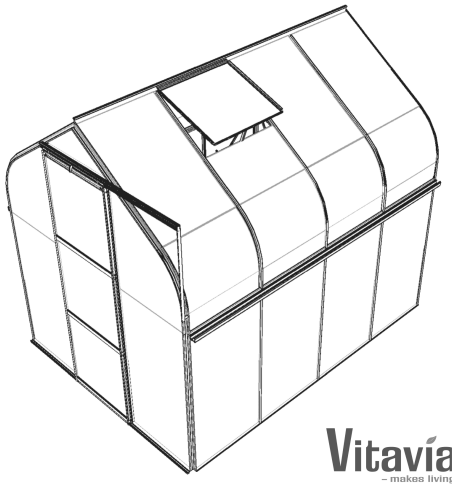
Greenhouse Stores

ASSEMBLY GUIDE

Orion 3800

6x6 Vitavia greenhouse



8
steps, base first

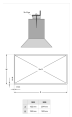
2
people needed

1922 mm × 1922 mm
base size (A × B)

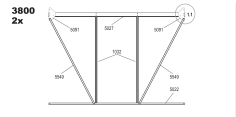
Toughened glass version

Online version with every size: www.greenhousestores.co.uk/instructions/vitavia-orion/

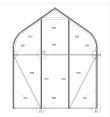
The build at a glance



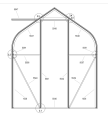
0
Prepare your base



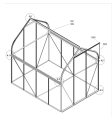
1
Build both side frames



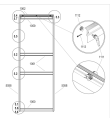
2
Build the back gable



3
Build the door gable



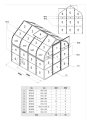
4
Join and square the frame



5
Build and hang the door



6
Build and fit the vent



7
Fit the glazing

Drawings: Vitavia (Vitavia manual 008.01.1306 (Orion 3800, 5000)). Words and layout: Greenhouse Stores, greenhousestores.co.uk. Keep this guide with your greenhouse.

READ THIS FIRST

Before you start

Six golden rules

1. Build frames loose; tighten only when the whole greenhouse stands square on its base.
2. Measure both diagonals; they must be equal.
3. Never overtighten nuts 1002: maximum 3 Nm. Overtightening strips aluminium and cracks glass.
4. Fit extra bolts when instructed; you cannot add them after bar ends are capped.
5. Build with two people.
6. Always anchor your greenhouse. An unanchored greenhouse can blow away.

Get ready

- [ ] Read the whole guide once before you start.
- [ ] Gather flat/PH2 screwdrivers, 10 mm socket spanner/wrench, 10 mm combination spanner, knife, tape measure, spirit level. Set cordless drill adjustable torque low.
- [ ] Wear gloves, safety glasses, sturdy shoes and a hat. Aluminium edges are sharp. Clear up broken glass straight away.
- [ ] Open one bundle at a time and keep opened bundles apart. Mixed bundles are the main cause of lost-part searches.
- [ ] Check every part against the parts check pages. Contact Greenhouse Stores before you begin if anything is missing.
- [ ] Read single-frame drawings as views from inside the greenhouse. Read double-frame drawings as views from outside.
- [ ] Choose a sunny spot with as much shelter from wind as possible.

Read next: 10 common greenhouse installation mistakes (and how to avoid them)

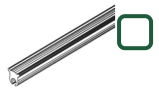
 Single frame: inside view  Double frame: outside view

BEFORE STEP 1

Parts check

Open one bundle at a time. Tick each part as you find it. The number in green is how many your Orion 3800 should have.

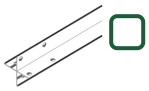
Bars and profiles



1020
Glazing seal (reel)
62000 mm **×1**



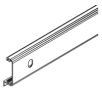
1032
Vertical bar
1214 mm **×4**



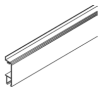
1036
1214 mm **×4**



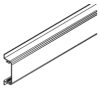
1051
Ridge bar
1862 mm **×1**



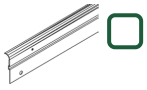
1059
Upper bar
621 mm **×1**



1060
Door bar
621 mm **×1**



1061
621 mm **×2**



1062
Door bar
613 mm **×1**



1063
Vent sill
635 mm **×1**



1064
Vent top bar
602 mm **×1**



1065
Vent side bar
520 mm **×2**



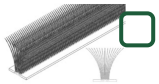
1066
Vent bottom bar
602 mm **×1**



1067
Window opener
295 mm **×1**



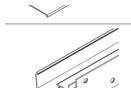
3057
Roof brace
841 mm **×2**



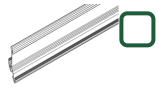
5021
Door seal
1991 mm **×2**



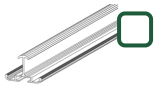
5022
1862 mm **×3**



5027
1862 mm **×2**



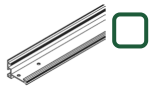
5041
Vertical bar
2030 mm **×2**



5042
Vertical bar
2030 mm **×2**



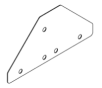
5043
Door runner support
750 mm **×1**



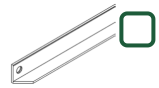
5058
Side bar
1991 mm **×2**



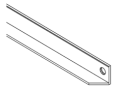
5062
1854 mm **×2**



5091
Corner plate
178 mm **×8**



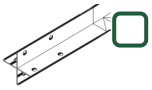
5096
619 mm **×1**



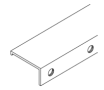
5097
619 mm **×1**



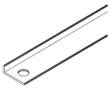
5537
1506 mm **×2**



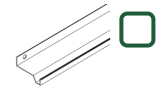
5538
1506 mm **×2**



5539
1854 mm **×1**



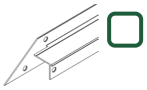
5540
Cross brace
984 mm **×4**



5546
1862 mm **×1**



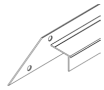
5547
Door runner bar
1303 mm **×1**



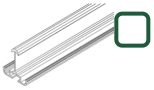
5548
Horizontal bar
696 mm **×1**



5549
1304 mm **×8**

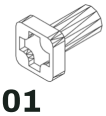


5554
696 mm **×1**



5555
Roof glazing bar
1483 mm **×4**

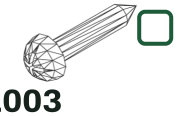
Fixings and small parts



1001
Bolt
M6 × 12 **×131**



1002
Nut
M6 **×131**



1003
Screw
3.5 × 16 **×16**



1004
M4 × 16 **×2**



1005
Bolt
M6 × 40 **×1**

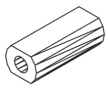
1006
Screw
3.5 × 6 **×6**



1007
Nut
M4 **×2**



1009
Washer
Ø8/4 **×2**



1010
Spacer
32 **×1**



1011
Glazing spring clip
70 **×250**



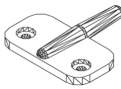
1012
Glass retaining clip
11 **×85**



1014
Door glider
20 **×2**



1015
Door roller
Ø22 **×2**



1016
Window fixer
40 **×2**



1017
End cap
46 **×4**



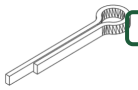
1019
Plastic cap
15 **×1**



1111
Door fixer
37.5 **×1**



1112
Door fixer
7.4 **×1**



1113
Door fixer
25 **×1**



1500
Bolt
M6 × 5 **×2**



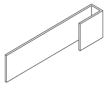
1515
Nut
M6 **×2**



5001
33 **×1**



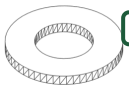
5002
33 **×1**



5012
38 **×12**



5090
610 × 610 **×6**

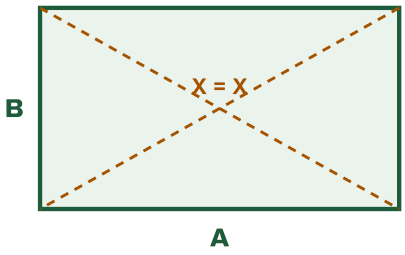


6060
Washer
Ø12/6 **×1**

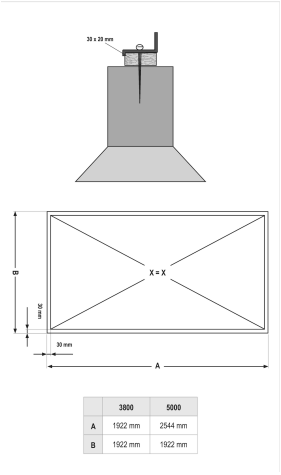
STEP 0

0 Prepare your base

Start with an exactly square, level base before you assemble the greenhouse.



	ORION 3800
A	1922 mm
B	1922 mm



Vitavia drawing 0. The circled numbers match the pictures below.

INSTALLER TIP

Use ground spikes or anchor legs on soil only. On concrete or paving, bolt the base down with suitable fixings; use one method, not both.

WATCH OUT

Check the base is square and level, or the frame above will be wrong. Glass will not fit an out-of-square frame.

0.1

Use an exactly square, level base; the accessory zinc-coated steel base is the easiest option. Measure both diagonals and check they match, as shown by X = X.

0.2

Only for DIY stone or concrete foundations, use sizes A and B. Fit treated timber between foundation and aluminium frame, minimum 18 mm high, maximum 32 mm wide; secure with 50 mm foundation bolts (not supplied). The foundation must extend below frost level.

0.3

On a very windy, exposed site, drill through the greenhouse bottom profile and steel base. Bolt them together.

STEP 1

1 Build both side frames

Build two identical side frames flat on the ground, and leave every bolt loose.

YOU NEED


1001 ×24


1002 ×24


1032 ×4

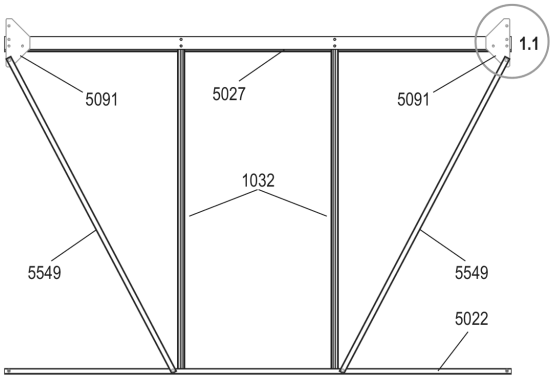

5022 ×2


5027 ×2


5091 ×4


5549 ×4

3800
2x



Vitavia drawing 1. The circled numbers match the pictures below.

INSTALLER TIP

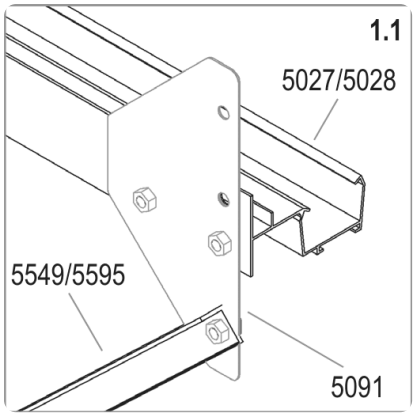
Lay the parts on a blanket or lawn to protect the finish. Leave every nut loose so the frames can flex during step 4.

WATCH OUT

Use 2 uprights 1032 per side on the 3800. Use 3 per side on the 5000.

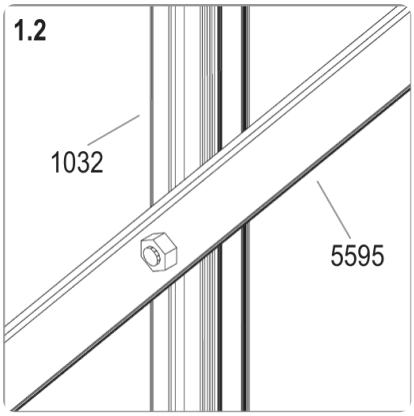
Watch: Build the sides

Scan with your phone camera. Vitavia video.



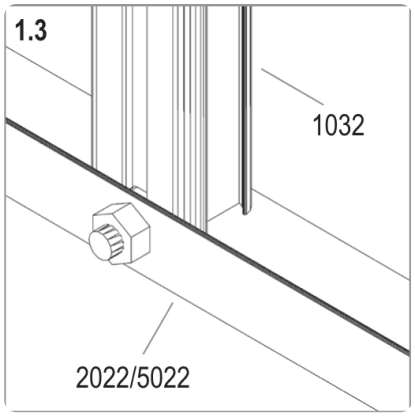
1.1

Loosely fit corner plate 5091 at each top end between your eave bar (5027 or 5028) and brace (5549 or 5595). Leave these bolts loose for the gable connections in step 4.



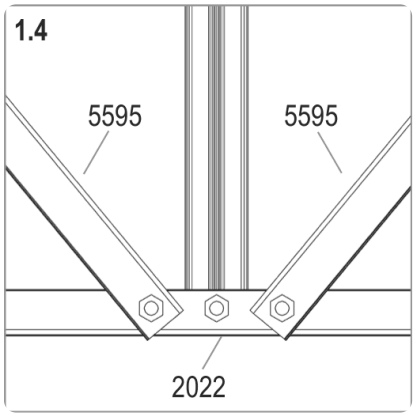
1.2

On the 5000, slide one extra bolt into each outside upright 1032 now. You need these bolts to connect cross brace 5595.



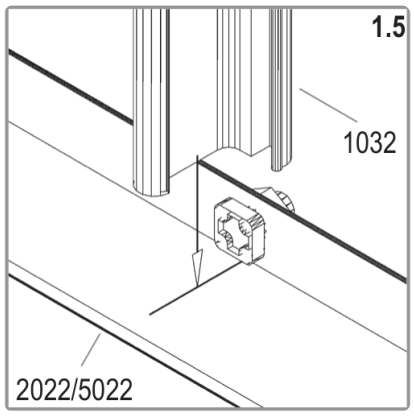
1.3

Bolt the bottom of each upright 1032 to your sill bar (5022 or 2022).



1.4

On the 5000, join both cross braces 5595 to sill bar 2022 as shown.



1.5 OUTSIDE VIEW

Slide the bolts into the sill bar channel through its open end, in the arrow's direction. Insert them before you close the bar end.

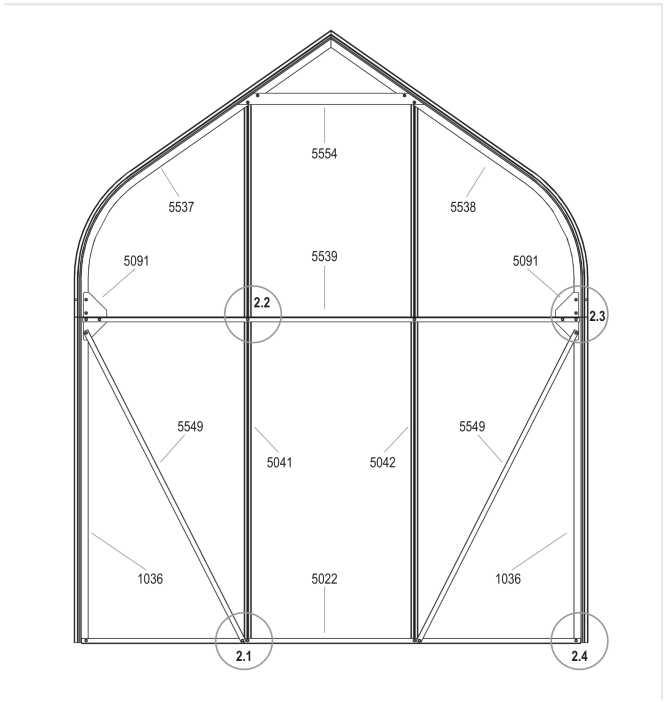
STEP 2

2 Build the back gable

Assemble the plain back gable flat on the ground, and leave the bolts loose.

YOU NEED

1001 ×22	**1002** ×22
1036 ×2	**5022** ×1
5041 ×1	**5042** ×1
5091 ×2	**5537** ×1
5538 ×1	**5539** ×1
5549 ×2	**5554** ×1



Vitavia drawing 2. The circled numbers match the pictures below.

INSTALLER TIP

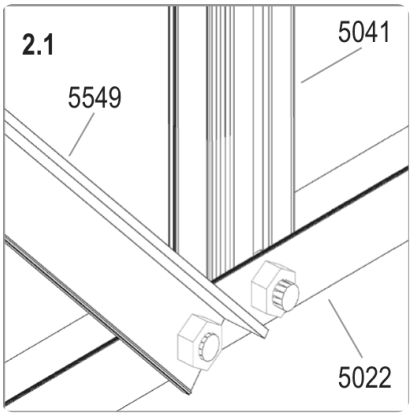
Work upwards from the bottom. Slide each extra bolt into its channel before you fit the bar above it.

WATCH OUT

Check the extra bolts are in vertical bars 5041 and 5042 before you cap the bar ends.

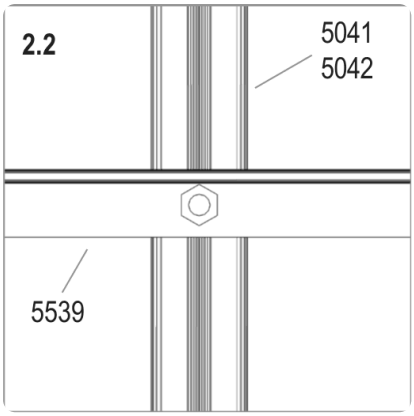
Watch: Rear gable end

Scan with your phone camera. Vitavia video.



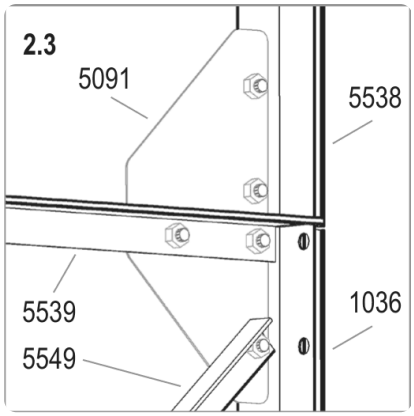
2.1

At the bottom, bolt brace 5549 and vertical bar 5041 to sill bar 5022.



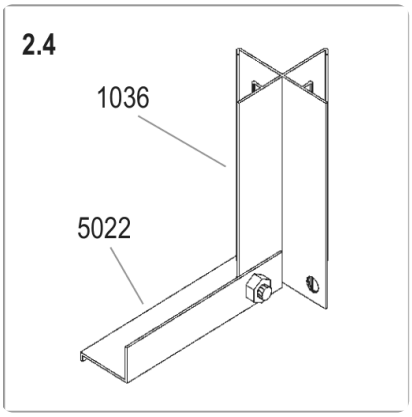
2.2

Bolt bar 5539 across vertical bars 5041 and 5042. Insert one extra bolt into each vertical bar now for the cross braces.



2.3

At each side, use corner plate 5091 to join roof bar 5538, bar 5539, brace 5549 and corner bar 1036.



2.4

At each bottom corner, bolt corner bar 1036 to sill bar 5022.

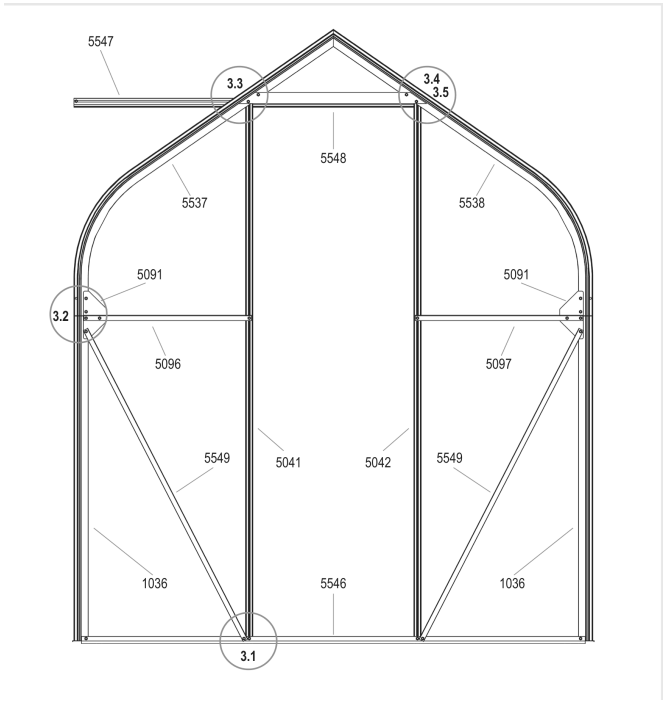
STEP 3

3 Build the door gable

Assemble the front door gable flat on the ground, and leave the bolts loose.

YOU NEED

1001 ×25	**1002** ×25
1036 ×2	**5001** ×1
5002 ×1	**5041** ×1
5042 ×1	**5091** ×2
5096 ×1	**5097** ×1
5537 ×1	**5538** ×1
5546 ×1	**5547** ×1
5548 ×1	**5549** ×2



Vitavia drawing 3. The circled numbers match the pictures below.

INSTALLER TIP

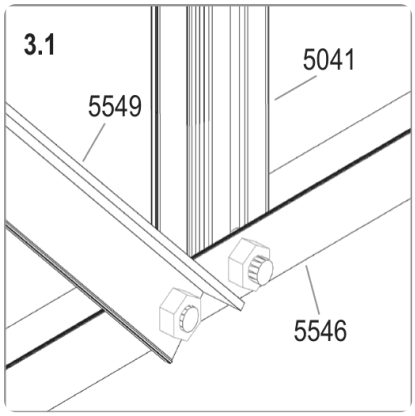
Position door runner bar 5547 left or right to suit your chosen door opening direction. Decide now; changing it later means taking the gable apart.

WATCH OUT

Insert one extra bolt into each vertical bar 5041 and 5042 before closing the ends. If parts will not align, check for bars fitted upside down or back to front.

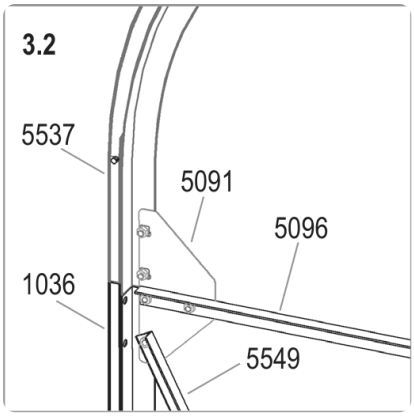
Watch: Door frame (front gable)

Scan with your phone camera. Vitavia video.



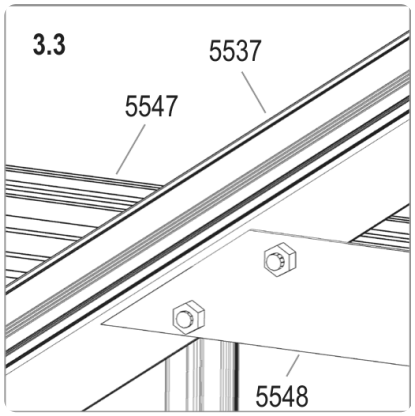
3.1

At the bottom, bolt brace 5549 and vertical bar 5041 to bottom bar 5546.



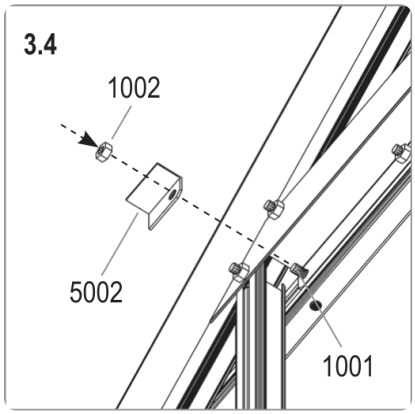
3.2

At each side, use corner plate 5091 to join roof bar 5537, corner bar 1036, bar 5096 and brace 5549.



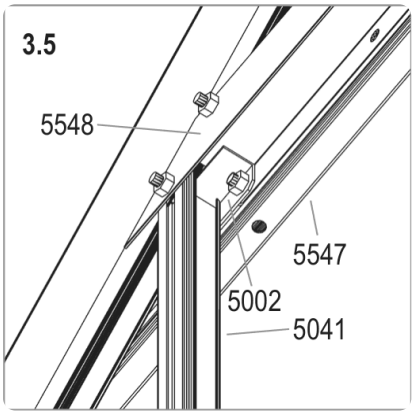
3.3

Join door runner bar 5547 and horizontal bar 5548 at roof bar 5537 as shown.



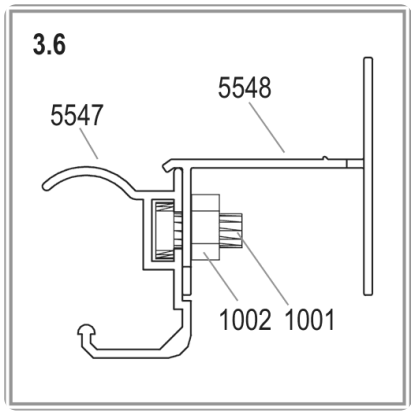
3.4

Connect part 5002 with bolt 1001 and nut 1002 as shown.



3.5

Use part 5002 to join horizontal bar 5548 and door runner bar 5547 at vertical bar 5041. Connect parts 5001 and 5002 with a bolt.



3.6 OUTSIDE VIEW

Work from the outside. Loosely connect door runner bar 5547 to horizontal bar 5548 with two nuts 1002 and bolts 1001.

STEP 4

4 Join and square the frame

Work with another person to join the frames and stand the greenhouse up, using drawing 4A before 4B.

YOU NEED


1001 ×26


1002 ×28


1005 ×1


1010 ×1


1051 ×1


5043 ×1


6060 ×1


1017 ×4


3057 ×2


5062 ×2


5540 ×4


5555 ×4

INSTALLER TIP

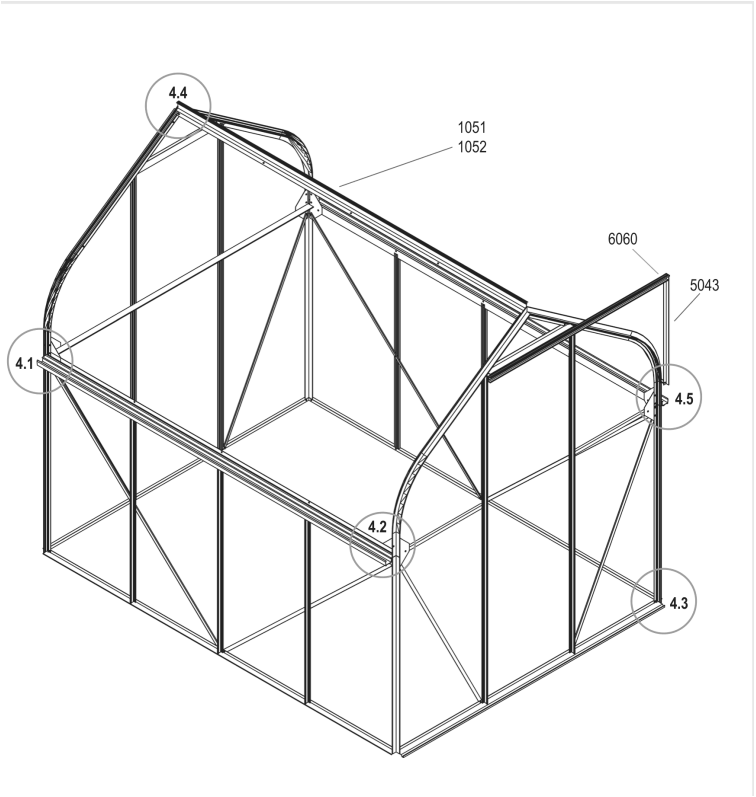
Count the circled extra bolts on every roof bar before you fit any end cap. The quantity depends on your greenhouse size.

WATCH OUT

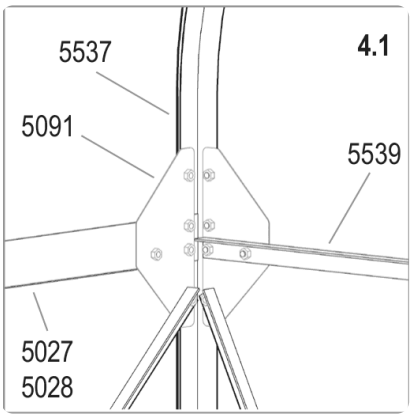
Keep all bolts loose until the greenhouse is square on its base. You cannot adjust the frame once the glass is fitted.

Watch: Front and roof bars

Scan with your phone camera. Vitavia video.

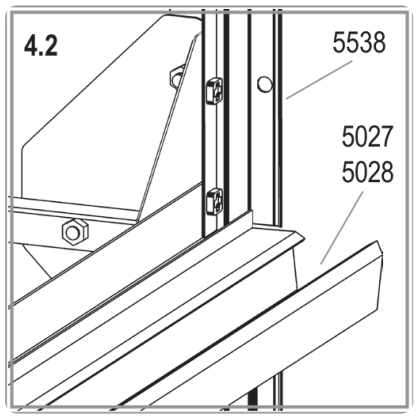


Vitavia drawing 4A. The circled numbers match the pictures below.



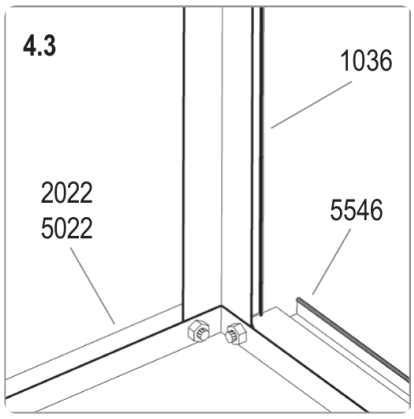
4.1

At each top corner, bolt your eave bar (5027 or 5028) to the gable end with corner plate 5091. Make this connection where roof bar 5537 and bar 5539 meet.



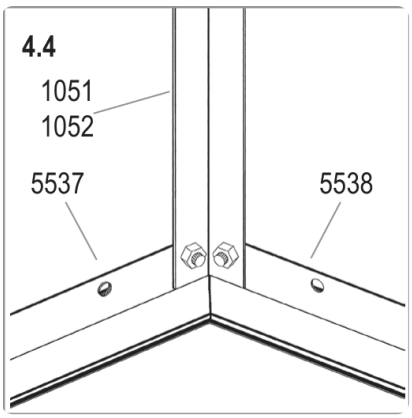
4.2 OUTSIDE VIEW

Work from the outside. Bolt the side frame to the gable where your eave bar (5027 or 5028) meets roof bar 5538, as shown.



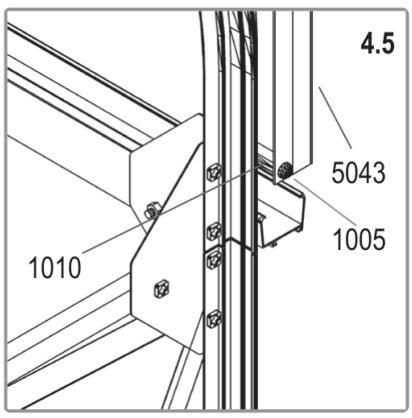
4.3

Bolt the side frames to the gable ends at the bottom corners. Join your sill bar (5022 or 2022), corner bar 1036 and bottom bar 5546 as shown.



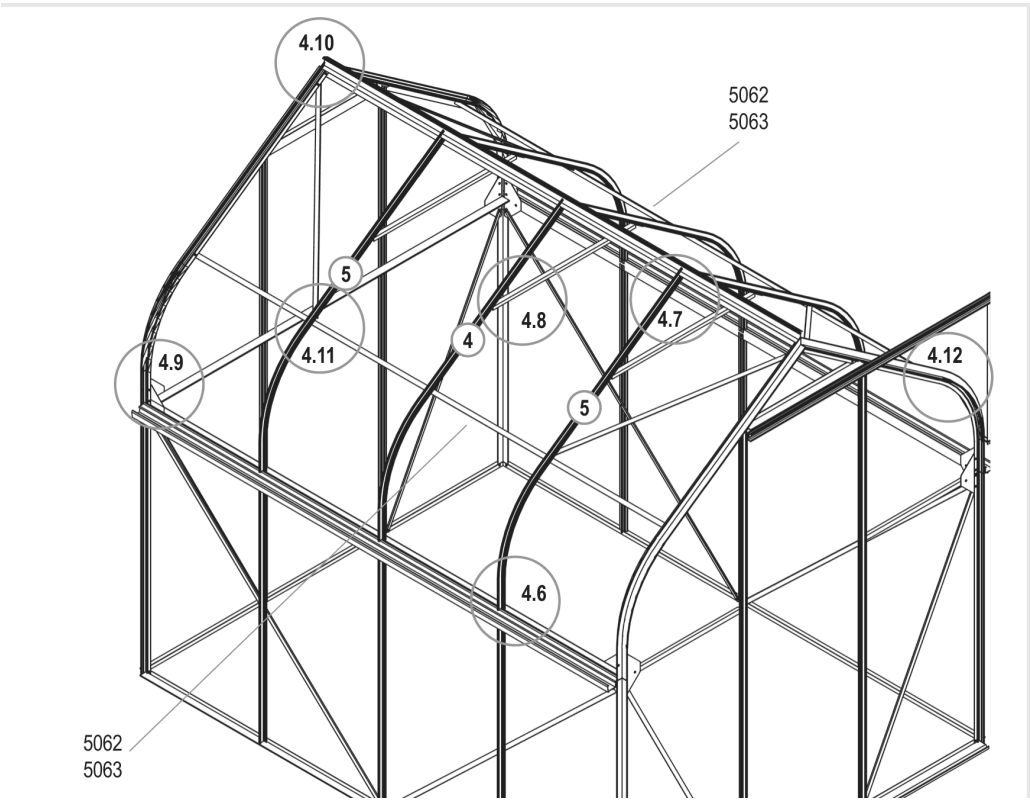
4.4

Bolt your ridge bar (1051 or 1052) to roof bars 5537 and 5538 at the top of both gable ends.

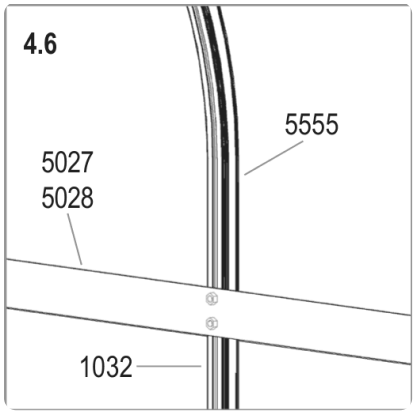


4.5 OUTSIDE VIEW

Connect door runner support 5043 to door runner bar 5547 with washer 6060. Fix the support to the gable end with bolt 1005 and spacer 1010.

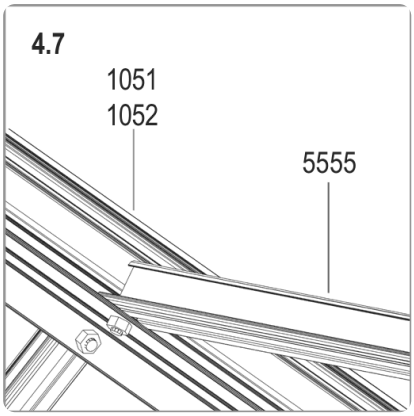


Vitavia drawing 4B. The circled numbers match the pictures below.



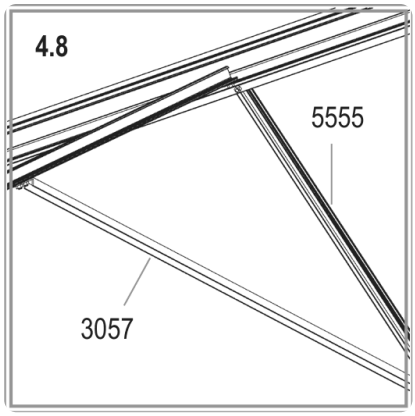
4.6

Follow drawing 4B. Bolt roof glazing bars 5555 to your eave bar (5027 or 5028), above upright 1032.



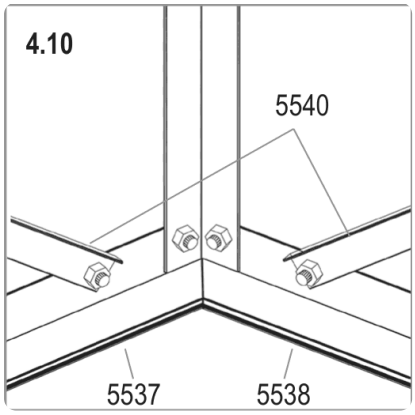
4.7

Bolt roof glazing bars 5555 to your ridge bar (1051 or 1052). Insert extra bolts into each glazing bar as you go. Each bar's circled number in the drawing gives the count from both ends of that bar.



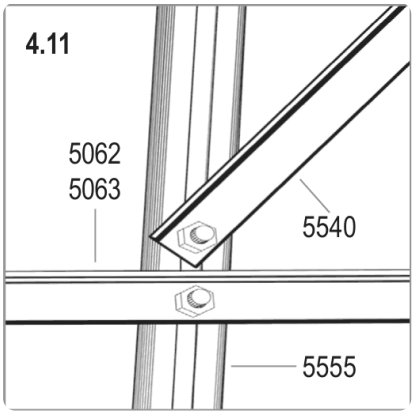
4.8 OUTSIDE VIEW

Work from the outside and connect roof braces 3057 to roof glazing bars 5555.



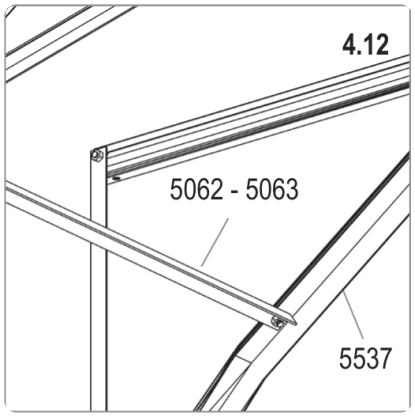
4.10

Connect cross braces 5540 to roof bars 5537 and 5538 at the gable peak as shown.



4.11

Bolt cross brace 5540 where it crosses roof glazing bar 5555 and your bar (5062 or 5063).

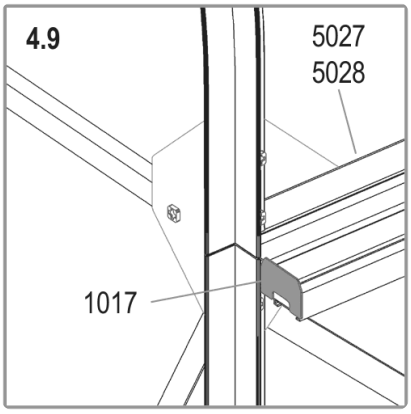


4.12

Connect your bar (5062 or 5063) to roof bar 5537 as shown.

DO THIS NOW

Place the greenhouse on your prepared base, bolt it down loosely, then adjust until both corner-to-corner measurements match. Only then tighten all bolts to a maximum of 3 Nm.



4.9 OUTSIDE VIEW

Press end caps 1017 onto the eave ends.

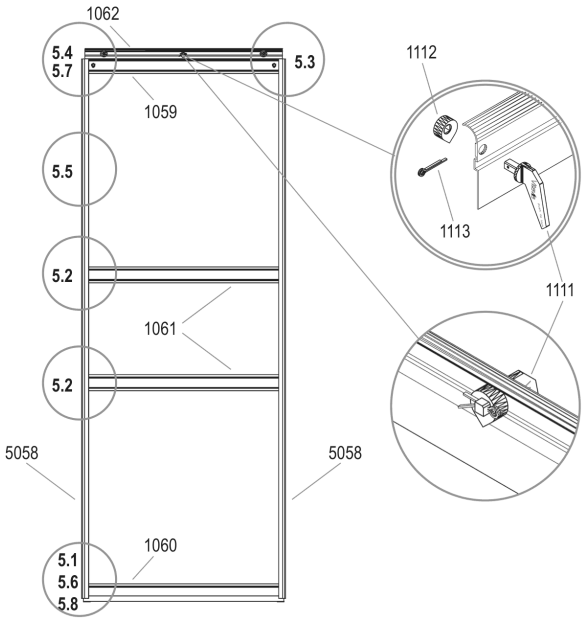
STEP 5

5 Build and hang the door

Assemble the sliding door, then hang it in the upper runner and bottom track.

YOU NEED

1001 ×3	**1002** ×3
1003 ×16	**1004** ×2
1007 ×2	**1009** ×2
1014 ×2	**1015** ×2
1059 ×1	**1060** ×1
1061 ×2	**1062** ×1
1111 ×1	**1112** ×1
1113 ×1	**1500** ×2
1515 ×2	**5021** ×2
5058 ×2	



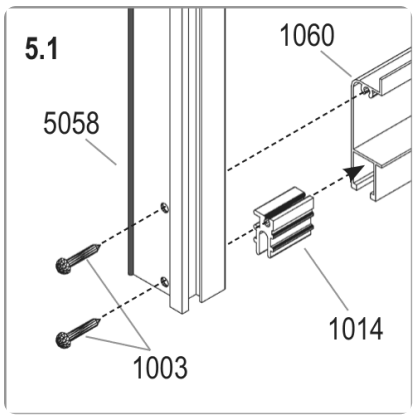
Vitavia drawing 5. The circled numbers match the pictures below.

INSTALLER TIP

If the door binds or jumps the track, check the frame is square before you force it. An out-of-square frame is almost certainly the cause.

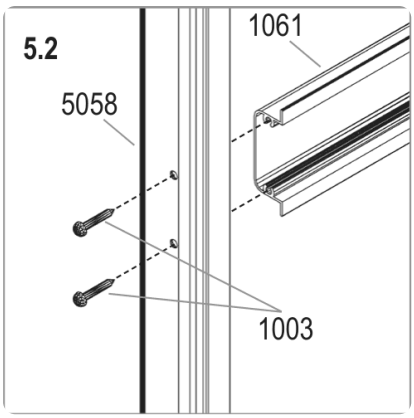
WATCH OUT

Never stand the assembled door on gliders 1014. This damages them.



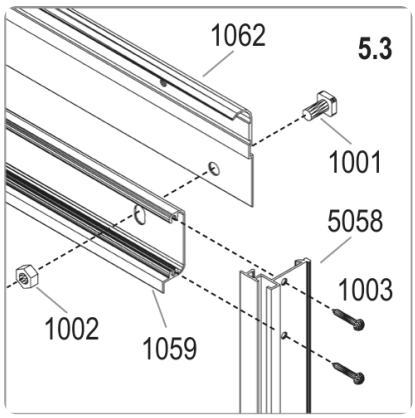
5.1

Push a door glider 1014 onto each end of bottom door bar 1060. Screw side bars 5058 to it with screws 1003.



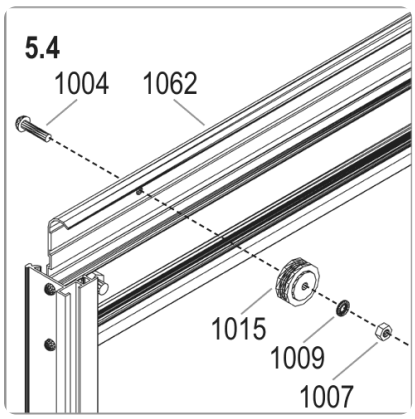
5.2

Screw middle bars 1061 between side bars 5058 with screws 1003.



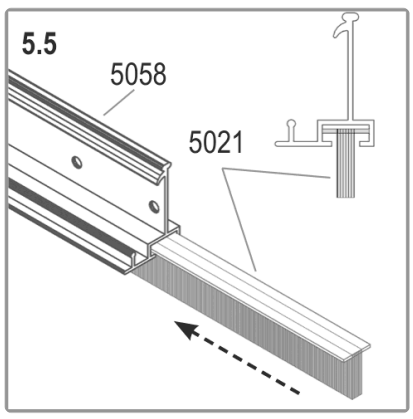
5.3

Bolt door bar 1062 to upper bar 1059 with bolt 1001 and nut 1002. Screw upper bar 1059 to side bars 5058 with screws 1003.



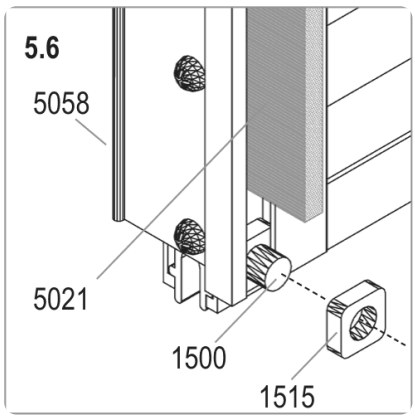
5.4

Fix both door rollers 1015 to door bar 1062 with bolt 1004, washer 1009 and nut 1007.



5.5 OUTSIDE VIEW

Slide door seals 5021 into side bars 5058.

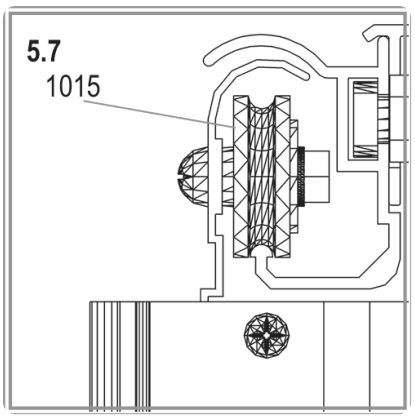


5.6

Slide bolt 1500 into the bottom of the door seal channel and secure it with nut 1515. This stops the seal sliding out.

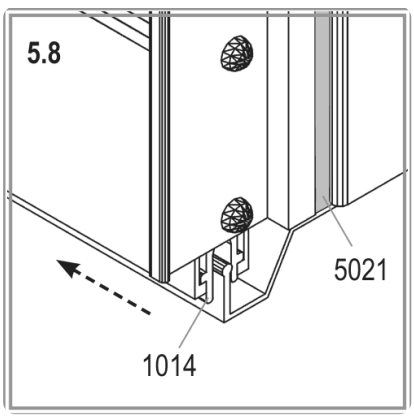
DO THIS NOW

Loosen door runner support 5043 before you hang the door.



5.7 OUTSIDE VIEW

Work from the outside. Lift the door and slide rollers 1015 into door runner bar 5547.



5.8 OUTSIDE VIEW

Check from the outside that door gliders 1014 also run in the bottom track.

DO THIS NOW

Connect door fixer parts 1111, 1112 and 1113 as shown, then adjust the door until it slides freely. Put a nut and bolt into the open end of door runner bar 5547 as a stop.

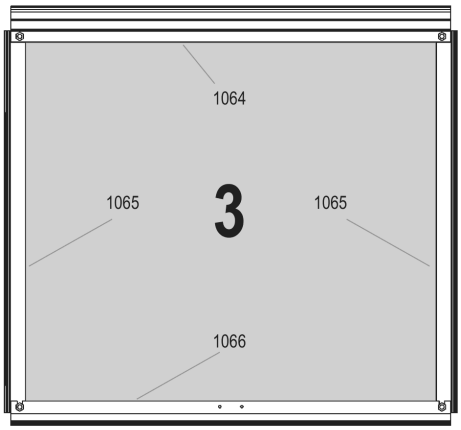
STEP 6

6 Build and fit the vent

Assemble and fit your Orion's one roof vent.

YOU NEED

	**1001** ×4		**1002** ×4
	**1006** ×6		**1016** ×2
	**1019** ×1		**1063** ×1
	**1064** ×1		**1065** ×2
	**1066** ×1		**1067** ×1



	Art. No.	mm	3800	5000
3	3679491	600 x 544	1	1

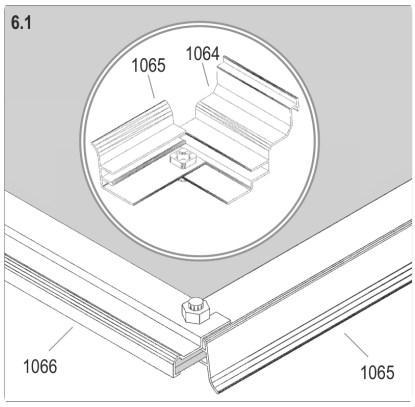
Vitavia drawing 6. The circled numbers match the pictures below.

INSTALLER TIP

Fit the slam bar (vent sill 1063) flat edge up, with its grooved lip down towards the pane below. Recheck its position if that pane will not sit snugly.

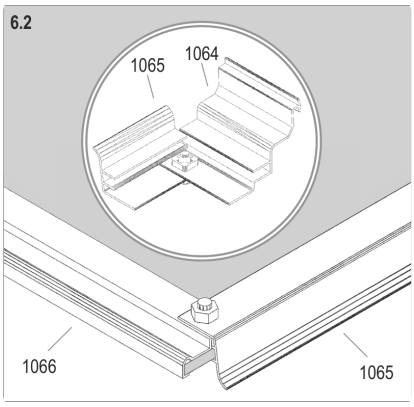
Watch: Build and fit the window

Scan with your phone camera. Vitavia video.



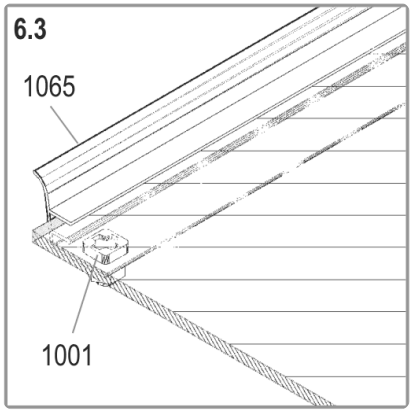
6.1

For glass up to 4 mm thick, join vent side bars 1065 and top bar 1064 as shown.



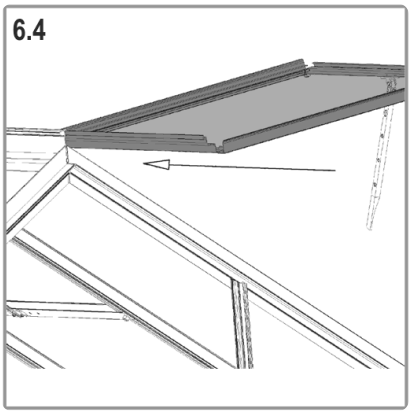
6.2

For glass 4 mm or thicker, join vent side bars 1065 and top bar 1064 as shown here instead.



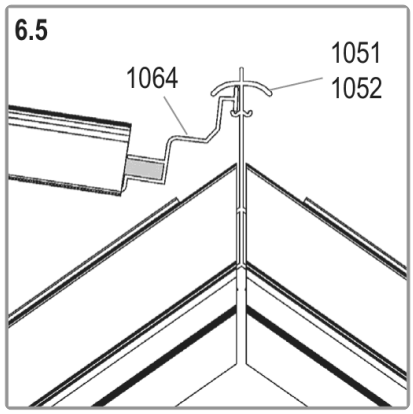
6.3 OUTSIDE VIEW

Insert the bottom bar 1066 bolts into the prepared holes, then slide the glass into side bar tracks 1065. Fit bottom bar 1066 and check the vent is square before tightening.



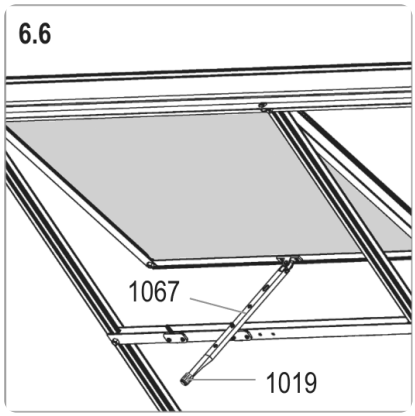
6.4 OUTSIDE VIEW

Hook the vent into the ridge bar from one end of the greenhouse.



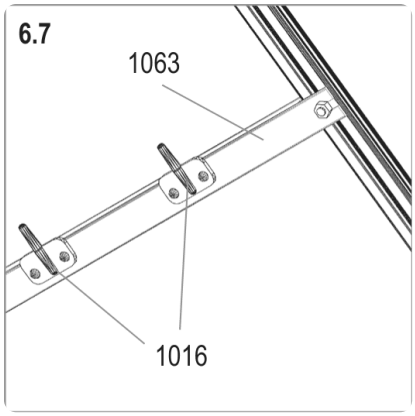
6.5 OUTSIDE VIEW

Hook vent top bar 1064 over your ridge bar (1051 or 1052).



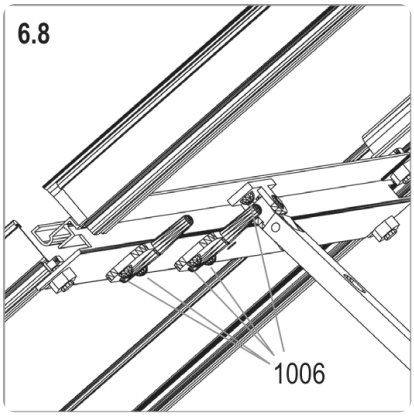
6.6

Slide the vent to your chosen position. Push plastic cap 1019 onto the end of window opener 1067.



6.7

Fix vent sill 1063 to the extra bolts you left in the roof bars.



6.8

Screw window opener 1067 to vent bottom bar 1066 with screws 1006. Screw both window fixers 1016 onto vent sill 1063 with screws 1006.

STEP 7

7 Fit the glazing

Fit the rubber seal before any glass, then follow the glazing layout for each opening.

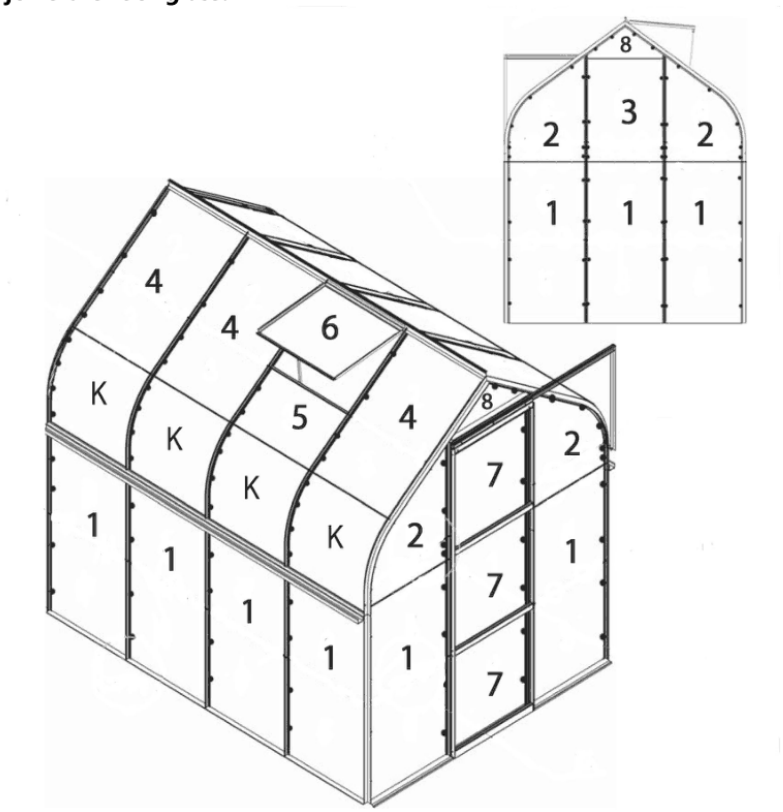
Your toughened glass

Your full toughened panes and Perspex roof panes K are tabulated below. Use the plan below for positions, not the drawing above. Join your gable glass and roof glass/Perspex with plastic H profiles, replacing glass retaining clips 1012. Vitavia advises you place spring clip 1011 directly over both H strip ends where roof glass meets Perspex.

PANE	SIZE (MM)	ORION 3800
1	610 × 1210	11
2	610 × 810 (curved)	4
3	610 × 813	1
4	610 × 889	5
5	610 × 351	1
6	600 × 544	1
7	610 × 610	3
8	610 × 216 × 6	2
K	610 × 610 (Perspex)	6
	Total panes	**34**
	Plastic H profiles	11

Orion: Glass plan for full pane toughened glass

Use plastic 'H' profiles in gables and in assembling roof glass with Perspex.
***NB:* The plastic 'H' profiles replace the Glass Retaining Clips 1012. It is also advisable to place a spring clip 1011 directly over the H strip at each end where the Perspex joins the roof glass.**



	Orion	3800	5000
1	610 x 1210mm	11	13
2	610 x 810mm (curve)	4	4
3	610 x 813mm	1	1
4	610 x 889mm	5	7
5	610 x 351mm	1	1
6	600 x 544mm	1	1
7	610 x 610mm	3	3
8	610 x 216 x 6mm	2	2
K	(610 x 610mm Perspex)	6	8
	Total	**34**	**40**
	Plastic 'H' profiles	11	13

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Vitavia's toughened glass plan. Pane numbers match the table.

YOU NEED

- **1011** ×240
- **1020** ×1
- **5012** ×10
- **5090** ×6

INSTALLER TIP

Soak the whole glazing seal reel in hot soapy water first so it presses on more easily. Check the glazing layout if a pane looks too big; it usually belongs in another opening.

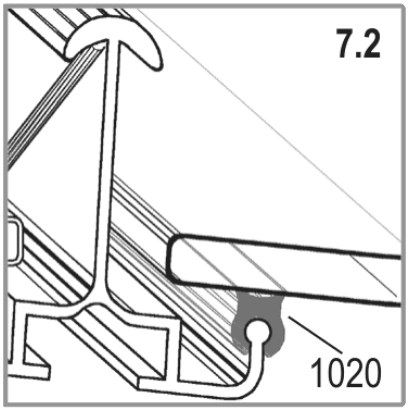
WATCH OUT

Never force a pane, as this cracks glass. If it will not seat, correct the out-of-square frame first.

Watch: Fitting the glazing rubber
Scan with your phone camera. Vitavia video.

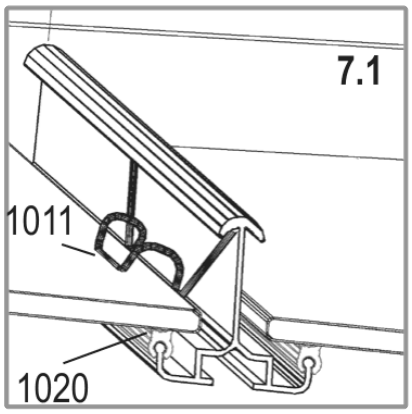
Watch: Glazing the roof with toughened glass
Scan with your phone camera. Vitavia video.

Watch: Bar capping (toughened glass and polycarbonate)
Scan with your phone camera. Vitavia video.



7.2 OUTSIDE VIEW

Press rubber glazing seal 1020 onto the aluminium profiles and cut it to length. Complete this before you fit any glass.



7.1 OUTSIDE VIEW

Start the roof at the eave with acrylic sheets 5090 over the curved section. Secure them with glazing spring clips 1011, bend them over the curve, then continue fixing with clips 1011.

DO THIS NOW

Glaze the sides from the bottom upwards.

LAST JOBS

Finish and look after it

Finish

- [ ] Anchor your greenhouse. This is required.
- [ ] Seal the edges with neutral silicone if you wish. Silicone is not supplied.
- [ ] Stick the warning label inside the greenhouse.
- [ ] Stick the model label onto door bar 1062. You need it to order spare parts.
- [ ] Keep this guide somewhere safe.

Looking after it

- [ ] Shut the door and vent in high winds.
- [ ] Clear the roof or support it in heavy snow. Heat the greenhouse in winter.
- [ ] Wash the greenhouse occasionally with a mild detergent that does not attack aluminium or the glazing clips.
- [ ] Keep the upper and lower door tracks clean to prevent grit build-up.
- [ ] Add the greenhouse to your home insurance and check local building rules about where you can put it.

Drawings reproduced from the Vitavia assembly instructions (Vitavia manual 008.01.1306 (Orion 3800, 5000)). Greenhouse Stores, greenhousestores.co.uk.