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01 Essential Tools:

Item	Tool Description
01	Cross Head 2PH (Philips Head No.2) screwdriver.
02	Sealant Gun (400ml capacity).
03	'Stanley' Type Knife (sharp blade).
04	Spirit level.
05	Wedge Gasket Insertion Tool (SUPPLIED if NOT pre-assembled)
06	Protective gloves (if installing glass panels as the glazing media).
07	Metal File.

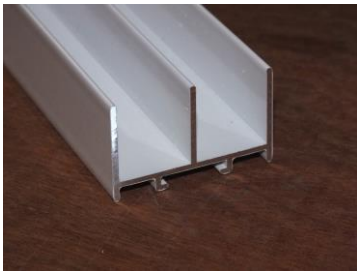
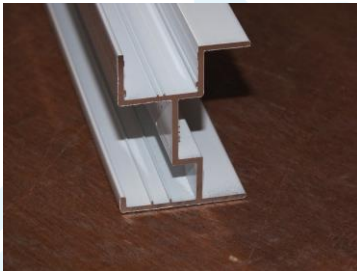
02 Tools that will make installation easier:

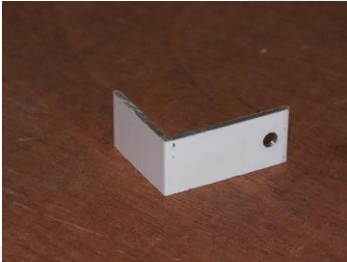
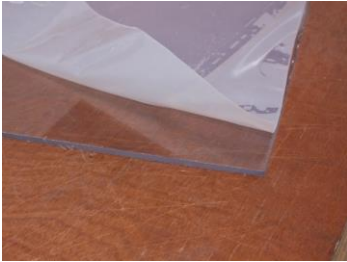
Item	Tool Description
01	Power Drill/Driver (ideally with hammer action/SDS capability).
02	2PH driver bit.
03	Screwdriver to suit fixings for securing frame to existing window frame or (into) window reveal.
	Driver bit(s) to suit fixings for securing frame to existing window frame or (into) window reveal.
04	Bowl of hot soapy water (to soften and lubricate wedge gasket to make wedge gasket insertion easier).

03 Items to be supplied by Installer

Item	Item Description
01	Fixings to secure (Vertical) Outer Frame sections to existing window frame (Face-Fix), or, Window Reveal (Reveal-Fix)..
02	Drill bits for fixings in 01.
03	Silicone sealant (normally white to match white secondary glazing unit powder coating finish).
04	Dry Lube Spray Silicone Lubricant (200ml) – may be useful to aid 'sliding' movement of glazed panels on runners.

04 2-Panel Horizontal Slider Main Components

Secondary Glazing Component	Note: <i>Components 1.to5. and 10. Are labelled to identify them. This is important in distinguishing between Right and Left Hand Glazed Frames.</i>
1. Outer Frame - Horizontal	
2. Outer Frame – Vertical	
3. Glazing Frame – Standard (fitted with gaskets, brush gaskets, glazing spacer)	
4. Glazing Frame – RHS Vertical (fitted with gaskets, brush gaskets, glazing spacer)	
5. Glazing Frame – Hook Vertical (fitted with gaskets, brush gaskets, glazing spacer)	

Secondary Glazing Component	
6. Handle fitted with 4mm (retaining) set-screw	
7. Outer Frame Corner Brackets	
8. Glazing Frame Corner Brackets	
9. Slider/ Finisher	
10. Glazing Panel Plate Polycarbonate/ Acrylic panel shown with protective film rolled back.	

05 Overview of Installation Process (Main Stages):

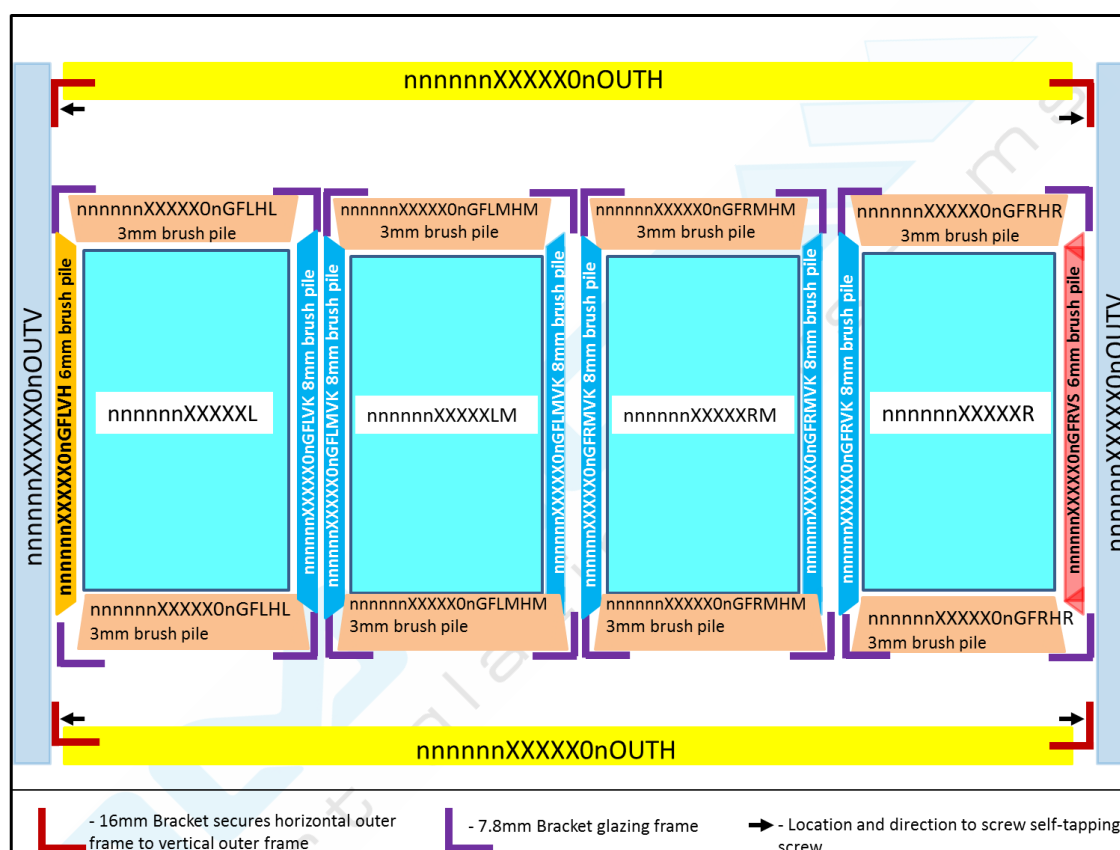
Stage	Stage Description
01	Measuring the (existing window) reveal dimensions.
02	Securing Vertical Outer Frames to Window Reveal or Existing Window Frame.
03	Securing Horizontal Outer Frames to (Fitted) Outer Vertical Frames.
04	Installing Glazed Frames into Outer Frames
05	Finishing Outer Frame/Window Reveal Join.

06 Schematic Layout showing location of main components.

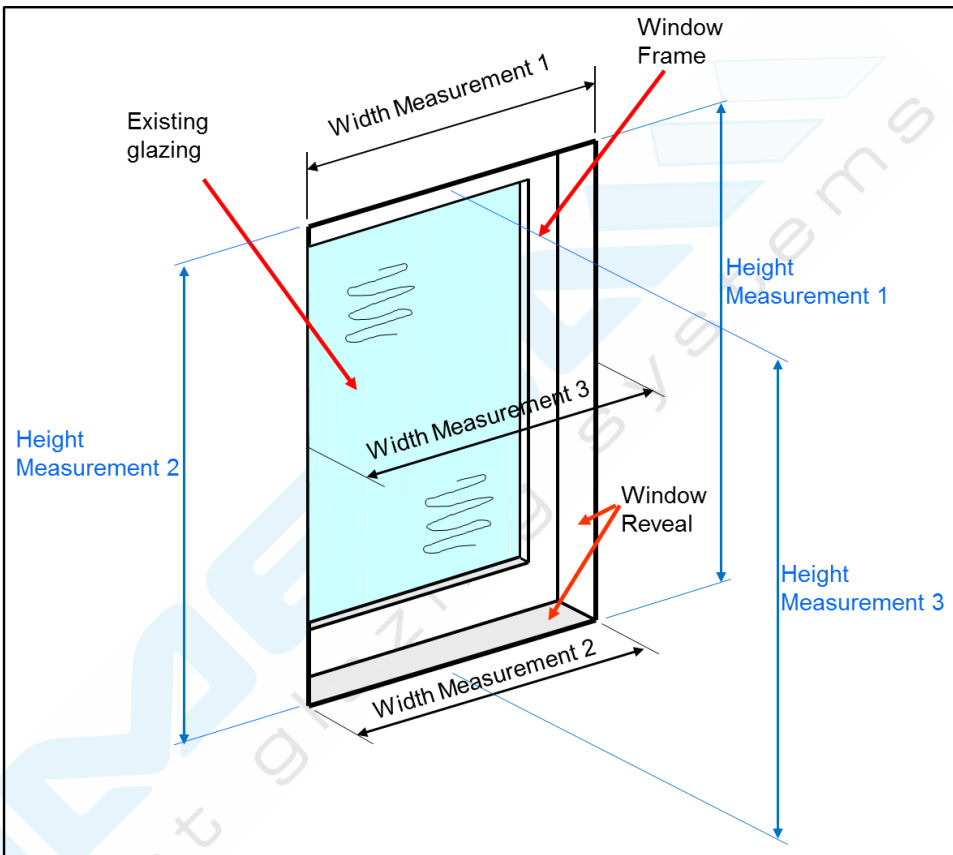
Note: 1. Viewed from inside room.

2. Components show the component identification label I.D. and

3. The specific brush pile used on the Glazing Frame components.

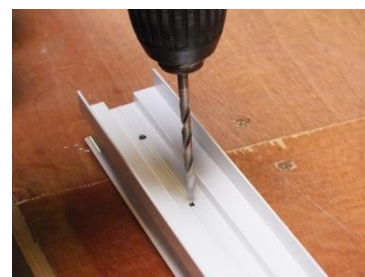


07 Installation Process; Main Stages in Detail:

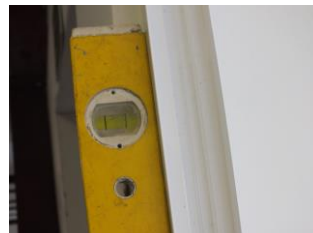
Process Step	Description
	<u>Stage 01: Measuring the (existing window) reveal dimensions</u>
01	 Measure the vertical and horizontal dimensions of your window reveal as shown in the schematic (above) using a metal measuring tape. Take these measurements as close to the position of the new secondary glazing unit as possible. <u>Note 1:</u> <i>Sometimes these dimensions can vary quite widely (+ 5mm). This is the nature of building dimensional tolerances. The Omega Smart Secondary Glazing system can be fitted directly where the variation is 5mm or less. If the dimensions vary by +5mm then the unit can still be fitted, but, the outer frames may require 'packing out' and additional finishing to achieve a pleasing and neat installed finish.</i>

01 (cont'd.)	<u>Note 2:</u> <i>To operate effectively the outer frames of the new secondary glazing unit should be fitted as close to perfectly horizontal and perfectly vertical.</i> <i>During the manufacturing process allowances are made dimensionally to the reveal dimensions supplied. This is to allow for a degree of window reveal 'out-of-squareness' so that the new secondary glazing unit can be fitted and still operate effectively.</i> <u>Note 3:</u> <i>There are (2) 'fixing' methods for securing the new secondary glazing unit in position:</i> <i>1. 'Face-Fix'. This is where the new secondary glazing unit (exterior frame) is screwed directly into the exiting window frame.</i> <i>In this case the measurement positions should be taken at the junction of the existing window reveal and the existing window frame.</i> <i>2. 'Reveal-Fix'. This is where the new secondary glazing unit (exterior frame) is screwed into the existing window reveal. The position here can be anywhere within the 'depth' of the existing window reveal.</i> <i>So, it might be helpful to mark a position with a pencil on the window reveal at the depth (from the existing window frame) where the new secondary glazing unit is to be fitted.</i> <i>This will help make sure that the height and width dimensions are taken in the correct locations. This can be a little tricky using retractable metal tape measure so taking the measurement several times to check that you are happy with the measurement is advisable (if a little trying).</i>
02	For each secondary glazing unit required record the minimum dimension (of the (3) dimensions recorded) for window reveal width and height. These (2) dimensions will form the basis of the secondary glazing unit price and also the dimensions for manufacturing the components for the secondary glazing unit kit of parts.

	<u>Stage 02: Securing Vertical Outer Frames to Window Reveal or Existing Window Frame.</u>
03	'Face-Fixing' (securing new secondary glazing outer frames to existing window frame). 'Reveal-Fixing' Securing new secondary glazing outer frames to Window Reveal (Rebate). The Vertical Outer Frames are fitted first. Check that the Vertical Outer Frames fit in place before undertaking any marking out. Also check that the Horizontal Outer Frames fit within the Vertical Outer Frames at this stage.
04	Mark the hole-positions in Vertical Outer Frames in the positions that you wish to secure the Vertical Outer Frames to your existing window frames. There are parallel fixing 'channels' that are intended as a guide for these fixing holes in the Vertical Outer Frames. A minimum of (2) holes in each Vertical Outer Frame are required, near the top and bottom of the Vertical Outer Frames. Additional fixing points maybe required especially where the new secondary glazing unit is greater than 1.0m in height. Round-head wood screws are recommended for fixing the Vertical Outer Frames to the existing window frame. Drill the fixing holes in the Vertical Outer Frames. These should be clearance holes for your chosen fixings.



05	Mark the fixing positions for the new Vertical Outer Frames on your existing window frame using a pencil or felt-tip marker pen and using the Vertical Outer Frames with the drilled holes for the exact hole positions. Use a Level to make sure that the Vertical Out Glazing Frames are 'perfectly' vertical in both directions. Drill pilot holes to suit your chosen fixings in your existing window frame. <u>Note:</u> 1. <i>It is at this point that you may need to 'pack-out' the Vertical Outer Frame to achieve the 'perfect' vertical.</i> 2. <i>f, there are gaps of +5mm then this is an indication that packing may be required.</i> 3. THIS IS IMPORTANT <i>In order that the pre-drilled holes (for securing the Horizontal Outer Frames to the Vertical Outer Frames (Stage 02) are in line horizontally you WILL need to temporarily fix the Horizontal Outer Frames in position to check with a Spirit Level(see Steps 11 and 13).</i>
06	Achieving a good seal against your existing window frame is very important for the performance of the new secondary glazing unit. Apply silicone sealant to the Vertical Outer Frame prior to securing the Vertical Outer Frame in position. The minimum application is to the face of the Vertical Outer Frame that will 'butt' against your existing window frame. You may also apply silicone sealant to the face of the Vertical Outer Frame that is immediately adjacent the existing window Reveal.

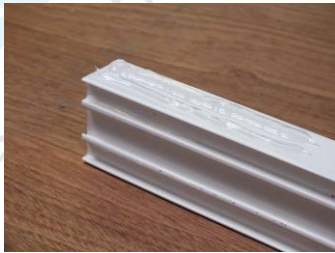


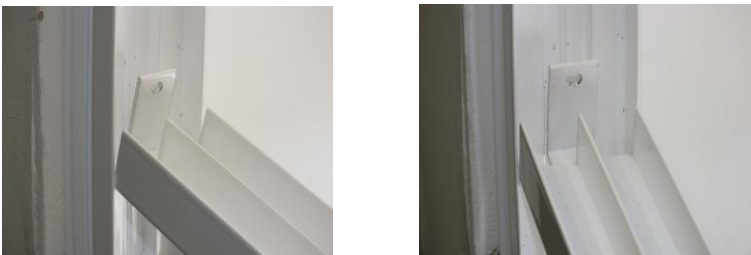
PLEASE NOTE:

The flat face of the vertical frame needs to be fitted to the back of the unit. Therefore the grooved face will be room side and covered by the finisher (see section 16)

07	Secure the Vertical Outer Frame in position. <u>Note:</u> <i>Make sure that there is no deflection along the length of the Vertical Glazing Frame (no deviation) from the vertical. This is important for the effective operation of the new secondary Glazing unit.</i>	
08	Repeat steps 03 – 09 for the Vertical Outer Frame on the other side of the existing window reveal.	

	<u>Stage 03: Securing Horizontal Outer Frames to (Fitted) Outer Vertical Frames.</u>
09	Assemble Outer Frame Corner Brackets to Horizontal Outer Frames.
10	This step is optional. It will provide a more secure installation and may be particularly appropriate where the width of the new secondary glazing unit is greater than 1.0m. If you wish to additionally fix the Horizontal Outer Frames to the window reveal using your own fixings this step must be undertaken now. Mark the position of your fixings in the Horizontal Outer Frame channel(s). Drill these fixing holes. <u>Note:</u> <i>These fixing holes must be centrally located between the vertical walls of the Horizontal Outer Frames.</i> <i>This will require some care and patience as the screw hole will almost certainly interfere with the side walls of the Outer Frame Corner Bracket guides.</i> <i>The fixings used should be Round Head.</i> <i>The diameter of the fixing head should be less than 12mm (the inside dimension of the Slider component).</i> <i>This is important so that The Slider component can be correctly installed and ensure the smooth operation of the sliding glazed frames.</i> <i>Mark the position of the fixing pilot holes in the horizontal window reveal using the Horizontal Outer Frame with the drilled holes as a guide for positioning these pilot holes.</i>

11	Achieving a good seal against your existing window frame is very important for the performance of the new secondary glazing unit. Apply silicone sealant to the Horizontal Outer Frame prior to securing the Horizontal Outer Frame in position. The minimum application is to the face of the Horizontal Outer Frame that will 'butt' against your existing window reveal. You may also apply silicone sealant to the face of the Vertical Outer Frame that is immediately adjacent the existing window Frame.  
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11 (cont'd.)	Insert the Horizontal Outer Frame/Outer Frame Corner Bracket Assembly inside the (2) installed Vertical Outer Frames.  Use the No.8 Self-Tapping Screws supplied to secure the Outer Frame Corner Brackets in position into the pre-drilled holes in the Vertical Outer Frames.  This secures the Horizontal Outer Frame in position. At this point, if you are undertaking the optional additional fixing of the Horizontal Outer Frame to the existing window frame use your chosen fixings to secure the Horizontal Outer Frame in position. <u>Note.</u> <i>It is important that the Horizontal Outer Frames are perfectly horizontal to ensure the smooth operation of the secondary glazing unit.</i> <i>If using additional optional fixings to secure the Horizontal Outer Frames make sure that the Horizontal Outer Frames do not deflect along their length.</i>
12	Repeat Steps 11 – 13 for the other Horizontal Outer Frame.

13

Insert Slider component into bottom Horizontal Outer Frame.

There (4) Slider/Finisher components supplied.

Normally, there will be:

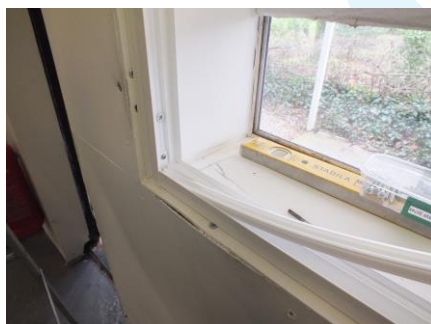
1. (2) Slider/Finisher components of length 'A', and
2. (2) Slider/Finisher Components of length 'B'.

'A' and 'B' are different lengths.

These components have been pre-treated with a dry lube silicone based lubricant. The surface will feel greasy. (This is important for the smooth operation of the secondary glazing unit).

Make sure that you use the correct Slider/Finishers by presenting them into the channels before any cutting is undertaken.

The (2) Slider/Finishers used in the bottom Horizontal Outer Frame will be slightly oversized for the (2) channels where they are to be installed.



The reason for this is that the material is easy to cut and therefore the slider/finisher can be cut-to-size using a Stanley Knife so that when installed in the channels the slider/finishers fit snugly. The ends of the Slider/Finisher will 'butt' upto the inside of the Vertical Outer Frames.

	<u>Stage 04: Assembling Glazing Frame – Frame 1, Right-Hand Frame (Stage 1.).</u> <i>Note:</i> <i>If your secondary glazing unit has been supplied with the Glazed Frames pre-assembled proceed to Step 35, Stage 12.</i>
14	Lay Main Components out on flat surface in the correct position and in the correct orientation. Main Components required: Label detail: • (2)off.400109SMITH09GFRHR • (1)off.400109SMITH09GFRVK • (1)off.400109SMITH09GFRVS Base Gaskets, Brush Gaskets and Packer pre-assembled. It is important that before assembly that these components are laid out in flat area with the components oriented correctly so that: • The Base (Retained) Gaskets are all located on one side of the frame. • The brush gaskets are located in the correct orientation. • The Glazing Frame sections are in the correct position and correctly oriented. See next page for diagrams that will help you get this alignment right.

15
 (cont)

Please refer to the following diagrams to ensure that location, position and alignment of the (above) Glazing frame components are correct.

DIAGRAM 1.

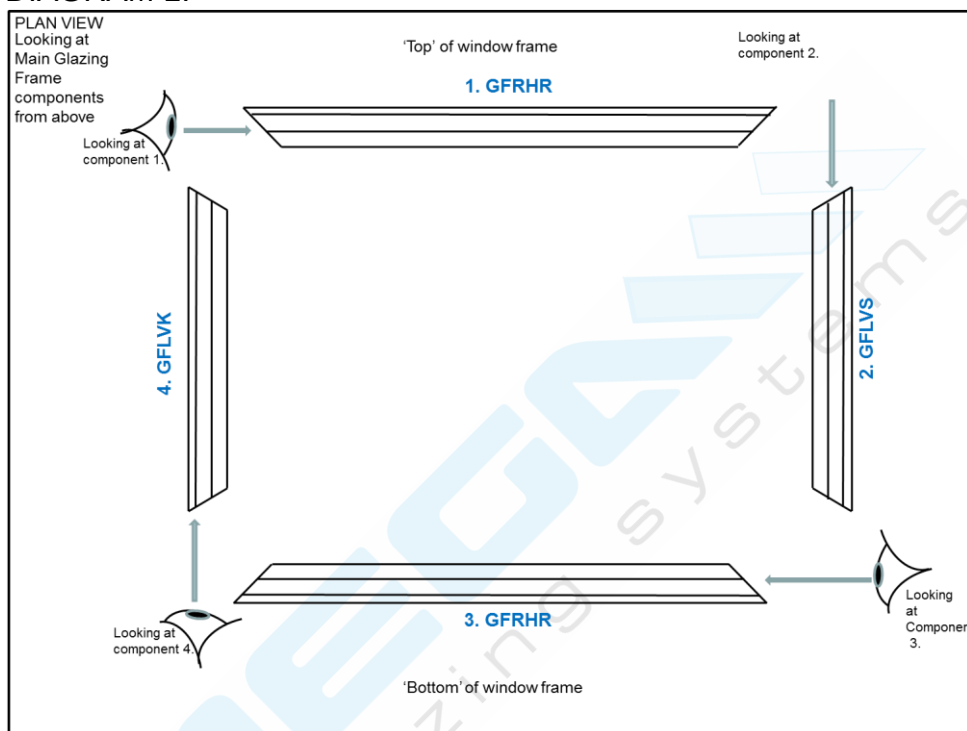
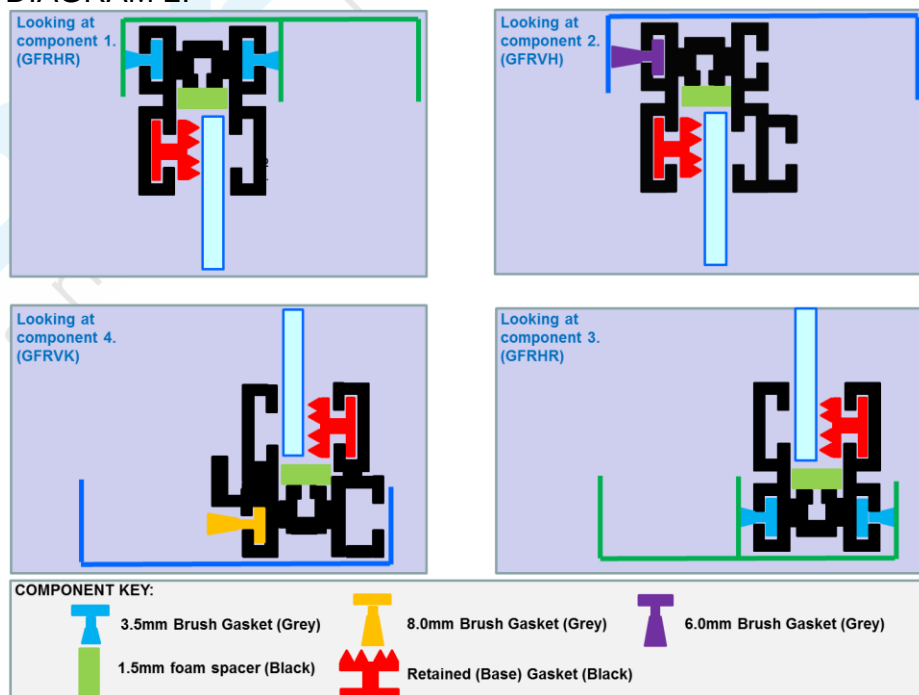
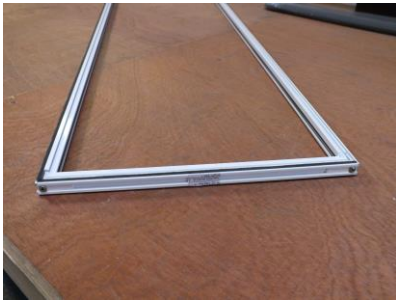
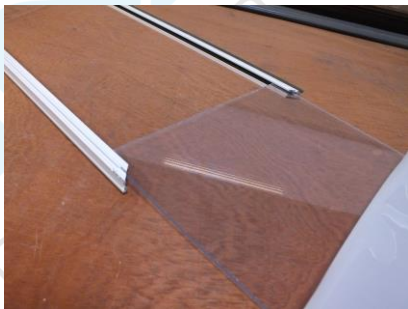
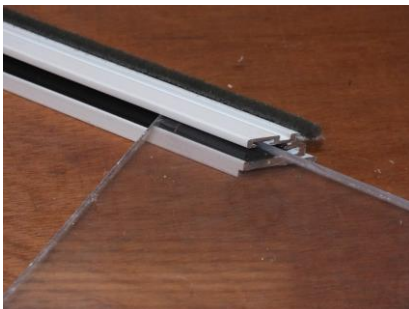


DIAGRAM 2.



16	Screw (3) of the Glazing Frames together. <u>Note:</u> We find that it is easier to assemble (2) longer glazing frame components together with (1) shorter glazing frame component. This makes the insertion of the glazing panel easier to manage in the next step. 1. Ensure that the Glazing Frame components are in the correct position and orientation (see previous Step 17.). 2. Make sure that when beginning to screw the (2) Glazing Frame components together that the gaskets do not overlap the ends of the glazing frame components and interfere with the mitre joint. 3. Use Philips Head Self-Tapping Screws supplied. Use 2PH Philips Head Screwdriver.(you could use a driver, but, a screwdriver for this operation is much easier to control and reduces the opportunity to mis-align the components and self-tapping screw. 4. Make sure that the self-tapping screw is used in conjunction with the Glazing Frame Corner Bracket.at each glazing frame corner joint. 5. Make sure that the self-tapping screw enters the screw port of the glazing frame component at right angles to the screw port.   This can be a little fiddly (holding the (2) glazing frame components, corner bracket and self-tapping screw in the correct positions. There is a knack that you will quickly acquire as you do more corner assemblies. Screw the self-tapping screw completely home. You will notice that the self-tapping screw will stop turning when applying the same 'torque' when 'home'. The mitre joint should be neat , with no variation in the joint line. The corner bracket will sit neatly within the channels of the (2) glazing frame components.
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	<u>Stage 05 Installing Glazing Panel to Glazing Frame1 and Stage 2 (Final) Assembly of Glazing Frame 1.</u>
17	Insert glazing panel into partially assembled Glazing Frame. 1. If you are using glass make sure that you are using protective gloves that offer some level of grip. The ideal gloves have rubber dimples on the gripping sides of the glove. 2. Make sure that the partially completed frame has the retained (base) gasket in the same and correct side of all (3) glazing frame components. It is easiest to slide the glazing panel on top of the retained (base) gasket. 3. 'Roll' back the protective film from both sides of the glazing panel so that the protective film cannot be trapped in the glazing frame channels. This must be done before the the glazing panel is pushed into the glazing frame assembly. 4. Another person is helpful. One person can 'push' the glazing panel into position in the glazing frame. The second person can help guide the glazing panel into the glazing frame and keep the glazing panel in the glazing frame channels. 5. Push the glazing panel 'home'. This position is where the glazing panel is 'butted' upto the spacer in the glazing frame component channel.    

- 18 Assemble 4th. Glazing Frame Component to partial Glazed Frame Assembly (with glazing panel inserted).

The process is the same as described in Step 18.



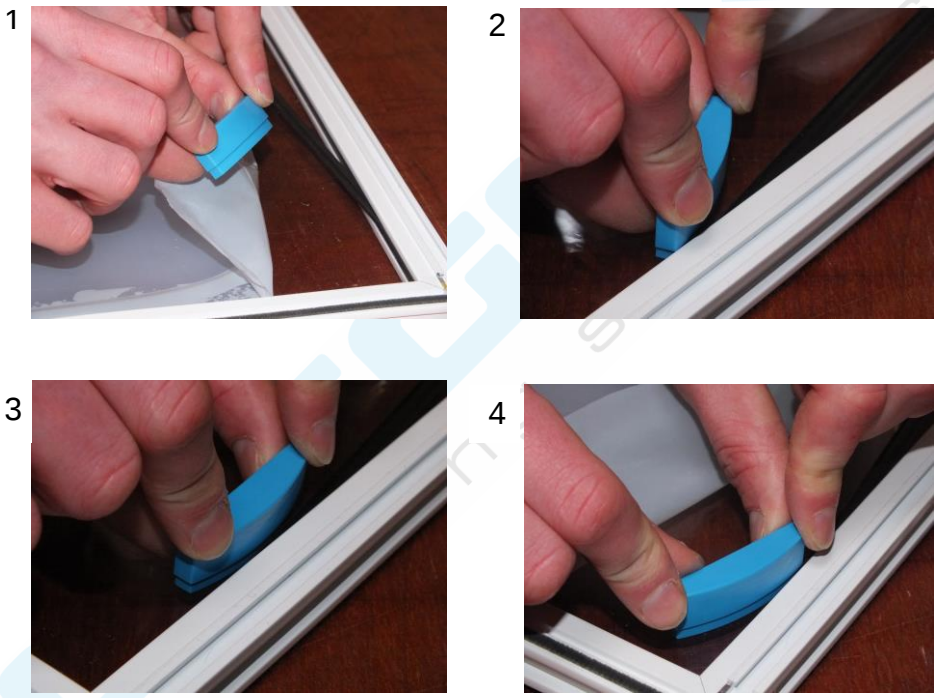
THIS IS IMPORTANT

When you are happy that you have completed the assembly of the Right-Hand Glazed Panel file off the corners of the outer glazed frame on the bottom side (this is the side that will slide on the slider).

This eliminates any sharp corner that can 'shave' off the material of the slider.



19	Insert Wedge Gasket The Wedge Gasket is supplied in one length for the complete secondary glazing unit. Enough is supplied for both Glazed Frames. <i>This Step is probably the most difficult aspect of the whole installation.</i> It is best to: 1. Be clear about the detail of this process. 2. Take your time. 3. Make sure that you have room to manoeuvre and access all of the Glazed Frame side that you are working on. 4. Have all of the tools that you need to hand. The installation of the Wedge Gasket is best undertaken on a flat surface, ideally at waste height with room to manoeuvre around the Glazed Frame. You will need to use a Stanlet Knife and the Wedge Gasket Insertion Tool (supplied). It will be useful to have a bowl of hot, soapy water to make the insertion of the Wedge Gasket easier. 1. Select the side of the Glazed frame on which to insert the wedge gasket. make sure that this is not the side with the installed Base (Retained gasket). 2. Measure the required length of wedge gasket required using the wedge gasket supplied against side frame into which it will be fitted. Cut this length of wedge gasket using the Stanley Knife. The cut should be 'square'. 3. Put the cut length of wedge gasket into the bowl of hot/soapy water. Note: Try Step 5 before immersion of the wedge gasket in the hot, soapy water. You may find that the insertion of the wedge gasket does not require (this) lubrication. 4. Remove the cut length of wedge gasket from the bowl after a couple of minutes. This lubricates the wedge gasket and softens it to make it more flexible and therefore ease the insertion of the wedge gasket.
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19. (cont.d.)	5. Begin insertion of the wedge gasket from one end of the selected side frame. This is likely to be the most fiddly part of the insertion process. Use the Gasket Insertion Tool to 'roll' the wedge gasket into position. The wedge gasket insertion tool is designed so that the gasket will not be pushed too far into the side frame.  6. If you are right-handed it is easier to move along the frame from 'Right' to 'Left' rocking/rolling the Insertion Tool stepping along by small amounts (less than 10mm) each roll. 7. This process is something that you will get better at as you progress and you will 'be able to 'feel' when the wedge gasket is inserted correctly. 8. It is always advisable to check after each 'rolling-step' (in the initial stages of wedge gasket insertion) that visually the wedge gasket is correctly inserted. 9. You may find that by the end of the Glazed frame where you are inserting the wedge gasket that the length of the wedge gasket has 'grown' in length. In order to make the insertion of the wedge gasket in the next section of the Glazed Frame it is advisable to trim the length back to the correct length (i.e where the length of the wedge gasket is directly aligned to the edge of the next section of Glazed Frame).
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19 (cont'd)	10. Before you trim the wedge gasket with the Stanley Knife leave the wedge gasket to cool for another 5 minutes. The reason for this is that if you trim the wedge gasket before it is cooled the wedge gasket will continue to cool and may shrink too much. Take care not to mark the glazing panel with the Stanley Knife. This is particularly important when Acrylic or Plate Polycarbonate is the Glazing Material. 11. When you have completed step 10 inspect the inserted gasket and if there are sections of the gasket that do not appear to be aligned/fully inserted; address these sections now. Repeat Steps 1. – 10. (above) for the remaining Glazed Frame sides.
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	<u>Stage 06: Assembling Glazing Frame – Frame 1, Right-Hand, Middle Frame (Stage 1.).</u> <i>Note:</i> <i>If your secondary glazing unit has been supplied with the Glazed Frames pre-assembled proceed to Step 33, Stage 10.</i>
20	Lay Main Components out on flat surface in the correct position and in the correct orientation. Main Components required: Label detail: • (2)off.400109SMITH09GFRMHM • (2)off.400109SMITH09GFRMVK Base Gaskets, Brush Gaskets and Packer pre-assembled. It is important that before assembly that these components are laid out in flat area with the components oriented correctly so that: • The Base (Retained) Gaskets are all located on one side of the frame. • The brush gaskets are located in the correct orientation. • The Glazing Frame sections are in the correct position and correctly oriented. See next page for diagrams that will help you get this alignment right.

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 (cont.d)

Please refer to the following diagrams to ensure that location, position and alignment of the (above) Glazing frame components are correct.

DIAGRAM 1.

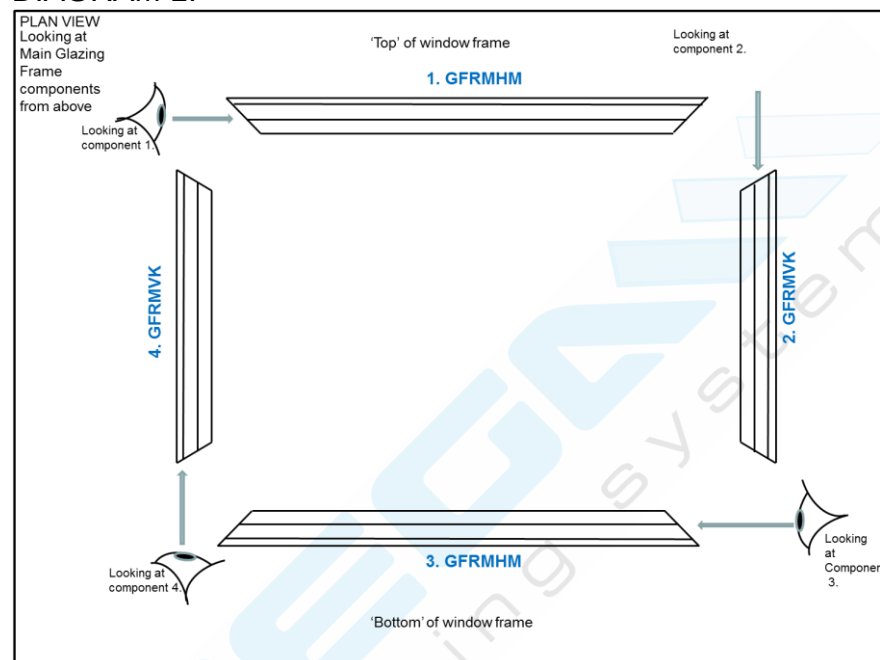
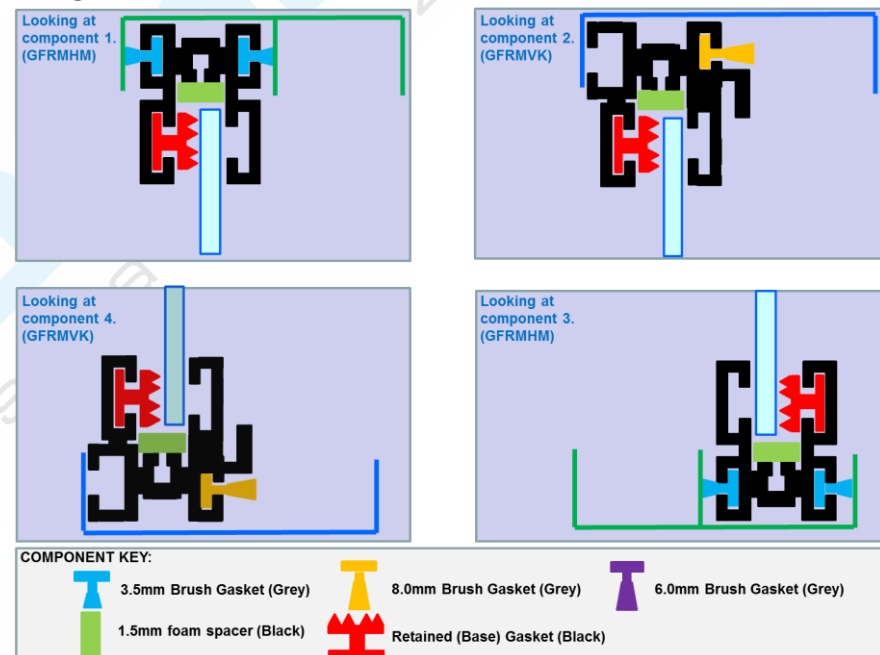
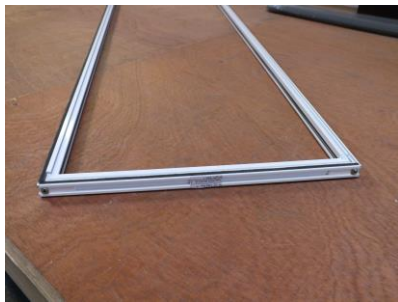
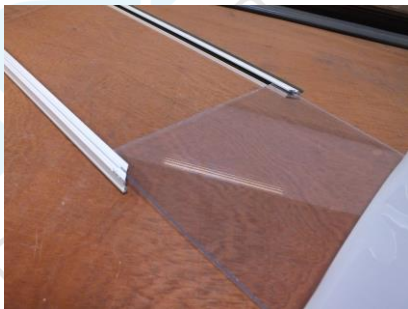
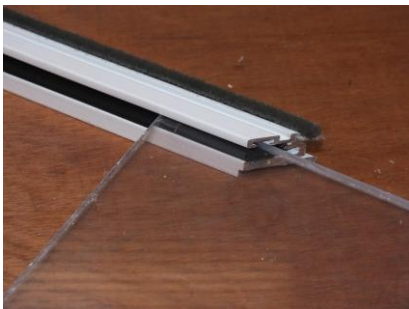


DIAGRAM 2.



21	Screw (3) of the Glazing Frames together. <u>Note:</u> We find that it is easier to assemble (2) longer glazing frame components together with (1) shorter glazing frame component. This makes the insertion of the glazing panel easier to manage in the next step. 6. Ensure that the Glazing Frame components are in the correct position and orientation (see previous Step 17.). 7. Make sure that when beginning to screw the (2) Glazing Frame components together that the gaskets do not overlap the ends of the glazing frame components and interfere with the mitre joint. 8. Use Philips Head Self-Tapping Screws supplied. Use 2PH Philips Head Screwdriver.(you could use a driver, but, a screwdriver for this operation is much easier to control and reduces the opportunity to mis-align the components and self-tapping screw. 9. Make sure that the self-tapping screw is used in conjunction with the Glazing Frame Corner Bracket.at each glazing frame corner joint. 10. Make sure that the self-tapping screw enters the screw port of the glazing frame component at right angles to the screw port.   This can be a little fiddly (holding the (2) glazing frame components, corner bracket and self-tapping screw in the correct positions. There is a knack that you will quickly acquire as you do more corner assemblies. Screw the self-tapping screw completely home. You will notice that the self-tapping screw will stop turning when applying the same 'torque' when 'home'. The mitre joint should be neat , with no variation in the joint line. The corner bracket will sit neatly within the channels of the (2) glazing frame components.
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	<u>Stage 07 Installing Glazing Panel to Glazing Frame1 and Stage 2 (Final) Assembly of Glazing Frame 1.</u>
22	Insert glazing panel into partially assembled Glazing Frame. 6. If you are using glass make sure that you are using protective gloves that offer some level of grip. The ideal gloves have rubber dimples on the gripping sides of the glove. 7. Make sure that the partially completed frame has the retained (base) gasket in the same and correct side of all (3) glazing frame components. It is easiest to slide the glazing panel on top of the retained (base) gasket. 8. 'Roll' back the protective film from both sides of the glazing panel so that the protective film cannot be trapped in the glazing frame channels. This must be done before the the glazing panel is pushed into the glazing frame assembly. 9. Another person is helpful. One person can 'push' the glazing panel into position in the glazing frame. The second person can help guide the glazing panel into the glazing frame and keep the glazing panel in the glazing frame channels. 10. Push the glazing panel 'home'. This position is where the glazing panel is 'butted' upto the spacer in the glazing frame component channel.    

- 23 Assemble 4th. Glazing Frame Component to partial Glazed Frame Assembly (with glazing panel inserted).

The process is the same as described in Step 18.



THIS IS IMPORTANT

When you are happy that you have completed the assembly of the Right-Hand Glazed Panel file off the corners of the outer glazed frame on the bottom side (this is the side that will slide on the slider).

This eliminates any sharp corner that can 'shave' off the material of the slider.



24	Insert Wedge Gasket The Wedge Gasket is supplied in one length for the complete secondary glazing unit. Enough is supplied for both Glazed Frames. <i>This Step is probably the most difficult aspect of the whole installation.</i> It is best to: 5. Be clear about the detail of this process. 6. Take your time. 7. Make sure that you have room to manoeuvre and access all of the Glazed Frame side that you are working on. 8. Have all of the tools that you need to hand. The installation of the Wedge Gasket is best undertaken on a flat surface, ideally at waste height with room to manoeuvre around the Glazed Frame. You will need to use a Stanlet Knife and the Wedge Gasket Insertion Tool (supplied). It will be useful to have a bowl of hot, soapy water to make the insertion of the Wedge Gasket easier. 12. Select the side of the Glazed frame on which to insert the wedge gasket. make sure that this is not the side with the installed Base (Retained gasket). 13. Measure the required length of wedge gasket required using the wedge gasket supplied against side frame into which it will be fitted. Cut this length of wedge gasket using the Stanley Knife. The cut should be 'square'. 14. Put the cut length of wedge gasket into the bowl of hot/soapy water. Note: Try Step 5 before immersion of the wedge gasket in the hot, soapy water. You may find that the insertion of the wedge gasket does not require (this) lubrication. 15. Remove the cut length of wedge gasket from the bowl after a couple of minutes. This lubricates the wedge gasket and softens it to make it more flexible and therefore ease the insertion of the wedge gasket.
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24. (cont.d.)	16. Begin insertion of the wedge gasket from one end of the selected side frame. This is likely to be the most fiddly part of the insertion process. Use the Gasket Insertion Tool to 'roll' the wedge gasket into position. The wedge gasket insertion tool is designed so that the gasket will not be pushed too far into the side frame. 1  2  3  4  17. If you are right-handed it is easier to move along the frame from 'Right' to 'Left' rocking/rolling the Insertion Tool stepping along by small amounts (less than 10mm) each roll. 18. This process is something that you will get better at as you progress and you will 'be able to 'feel' when the wedge gasket is inserted correctly. 19. It is always advisable to check after each 'rolling-step' (in the initial stages of wedge gasket insertion) that visually the wedge gasket is correctly inserted. 20. You may find that by the end of the Glazed frame where you are inserting the wedge gasket that the length of the wedge gasket has 'grown' in length. In order to make the insertion of the wedge gasket in the next section of the Glazed Frame it is advisable to trim the length back to the correct length (i.e where the length of the wedge gasket is directly aligned to the edge of the next section of Glazed Frame).
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24 (cont'd)	21. Before you trim the wedge gasket with the Stanley Knife leave the wedge gasket to cool for another 5 minutes. The reason for this is that if you trim the wedge gasket before it is cooled the wedge gasket will continue to cool and may shrink too much. Take care not to mark the glazing panel with the Stanley Knife. This is particularly important when Acrylic or Plate Polycarbonate is the Glazing Material. 22. When you have completed step 10 inspect the inserted gasket and if there are sections of the gasket that do not appear to be aligned/fully inserted; address these sections now. Repeat Steps 1. – 10. (above) for the remaining Glazed Frame sides.
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	<u>Stage 08: Assembling Glazing Frame – Frame 1, Right-Hand Frame (Stage 1.).</u> <i>Note:</i> <i>If your secondary glazing unit has been supplied with the Glazed Frames pre-assembled proceed to Step 33, Stage 10.</i>
25	Lay Main Components out on flat surface in the correct position and in the correct orientation. Main Components required: Label detail: • (2)off.400109SMITH09GFLMHM • (2)off.400109SMITH09GFLMVK Base Gaskets, Brush Gaskets and Packer pre-assembled. It is important that before assembly that these components are laid out in flat area with the components oriented correctly so that: • The Base (Retained) Gaskets are all located on one side of the frame. • The brush gaskets are located in the correct orientation. • The Glazing Frame sections are in the correct position and correctly oriented. See next page for diagrams that will help you get this alignment right.

25
 (cont.d)

Please refer to the following diagrams to ensure that location, position and alignment of the (above) Glazing frame components are correct.

DIAGRAM 1.

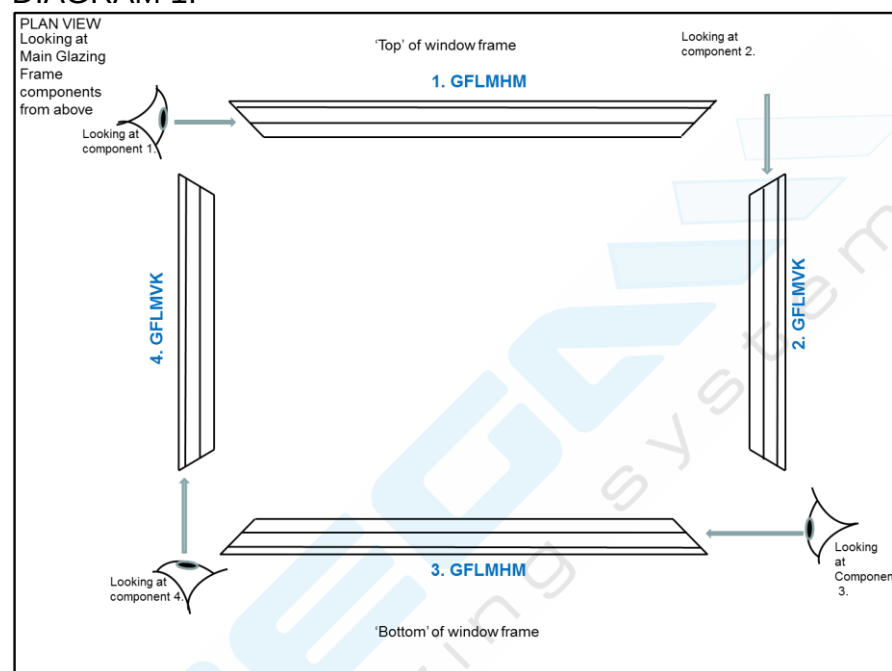
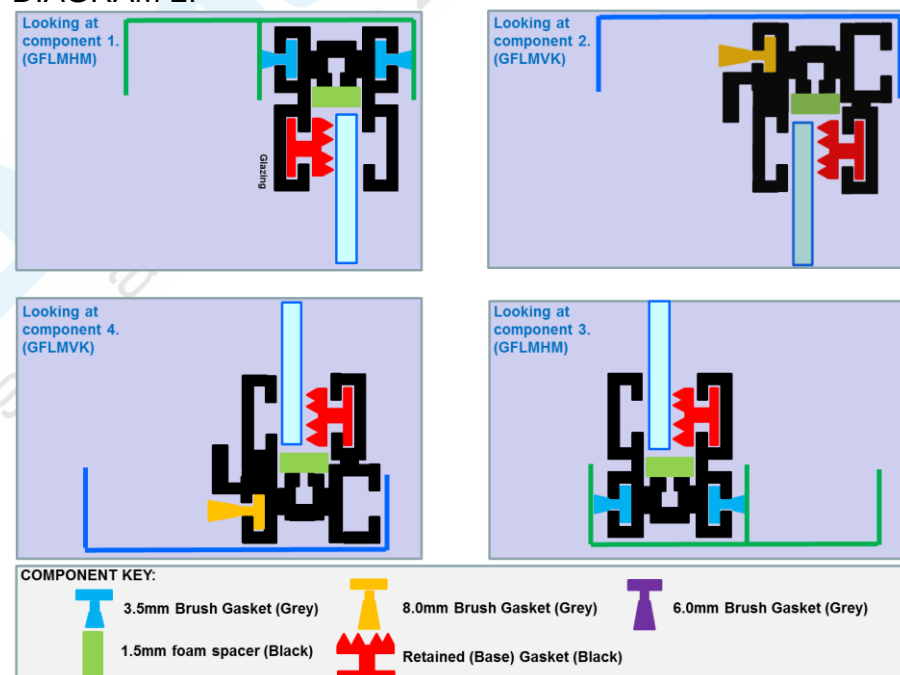
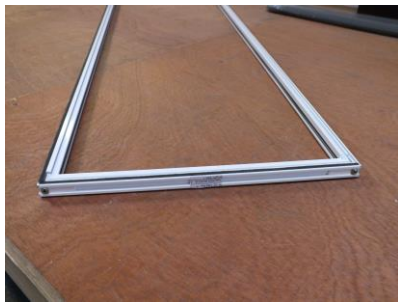
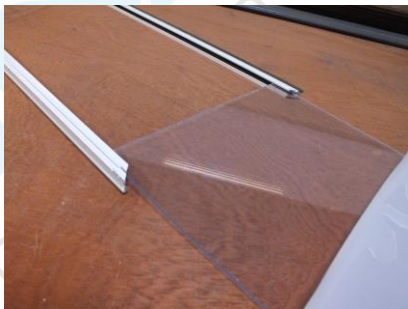
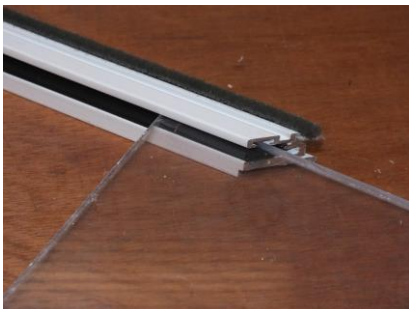


DIAGRAM 2.



26	Screw (3) of the Glazing Frames together. <u>Note:</u> We find that it is easier to assemble (2) longer glazing frame components together with (1) shorter glazing frame component. This makes the insertion of the glazing panel easier to manage in the next step. 11. Ensure that the Glazing Frame components are in the correct position and orientation (see previous Step 17.). 12. Make sure that when beginning to screw the (2) Glazing Frame components together that the gaskets do not overlap the ends of the glazing frame components and interfere with the mitre joint. 13. Use Philips Head Self-Tapping Screws supplied. Use 2PH Philips Head Screwdriver.(you could use a driver, but, a screwdriver for this operation is much easier to control and reduces the opportunity to mis-align the components and self-tapping screw. 14. Make sure that the self-tapping screw is used in conjunction with the Glazing Frame Corner Bracket.at each glazing frame corner joint. 15. Make sure that the self-tapping screw enters the screw port of the glazing frame component at right angles to the screw port.   This can be a little fiddly (holding the (2) glazing frame components, corner bracket and self-tapping screw in the correct positions. There is a knack that you will quickly acquire as you do more corner assemblies. Screw the self-tapping screw completely home. You will notice that the self-tapping screw will stop turning when applying the same 'torque' when 'home'. The mitre joint should be neat , with no variation in the joint line. The corner bracket will sit neatly within the channels of the (2) glazing frame components.
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	<u>Stage 09 Installing Glazing Panel to Glazing Frame1 and Stage 2 (Final) Assembly of Glazing Frame 1.</u>
27	Insert glazing panel into partially assembled Glazing Frame. 11. If you are using glass make sure that you are using protective gloves that offer some level of grip. The ideal gloves have rubber dimples on the gripping sides of the glove. 12. Make sure that the partially completed frame has the retained (base) gasket in the same and correct side of all (3) glazing frame components. It is easiest to slide the glazing panel on top of the retained (base) gasket. 13. 'Roll' back the protective film from both sides of the glazing panel so that the protective film cannot be trapped in the glazing frame channels. This must be done before the the glazing panel is pushed into the glazing frame assembly. 14. Another person is helpful. One person can 'push' the glazing panel into position in the glazing frame. The second person can help guide the glazing panel into the glazing frame and keep the glazing panel in the glazing frame channels. 15. Push the glazing panel 'home'. This position is where the glazing panel is 'butted' upto the spacer in the glazing frame component channel.    

- 28 Assemble 4th. Glazing Frame Component to partial Glazed Frame Assembly (with glazing panel inserted).

The process is the same as described in Step 18.



THIS IS IMPORTANT

When you are happy that you have completed the assembly of the Right-Hand Glazed Panel file off the corners of the outer glazed frame on the bottom side (this is the side that will slide on the slider).

This eliminates any sharp corner that can 'shave' off the material of the slider.



29	Insert Wedge Gasket The Wedge Gasket is supplied in one length for the complete secondary glazing unit. Enough is supplied for both Glazed Frames. <i>This Step is probably the most difficult aspect of the whole installation.</i> It is best to: 9. Be clear about the detail of this process. 10. Take your time. 11. Make sure that you have room to manoeuvre and access all of the Glazed Frame side that you are working on. 12. Have all of the tools that you need to hand. The installation of the Wedge Gasket is best undertaken on a flat surface, ideally at waste height with room to manoeuvre around the Glazed Frame. You will need to use a Stanlet Knife and the Wedge Gasket Insertion Tool (supplied). It will be useful to have a bowl of hot, soapy water to make the insertion of the Wedge Gasket easier. 23. Select the side of the Glazed frame on which to insert the wedge gasket. make sure that this is not the side with the installed Base (Retained gasket). 24. Measure the required length of wedge gasket required using the wedge gasket supplied against side frame into which it will be fitted. Cut this length of wedge gasket using the Stanley Knife. The cut should be 'square'. 25. Put the cut length of wedge gasket into the bowl of hot/soapy water. Note: Try Step 5 before immersion of the wedge gasket in the hot, soapy water. You may find that the insertion of the wedge gasket does not require (this) lubrication. 26. Remove the cut length of wedge gasket from the bowl after a couple of minutes. This lubricates the wedge gasket and softens it to make it more flexible and therefore ease the insertion of the wedge gasket.
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29. (cont.d.)	27. Begin insertion of the wedge gasket from one end of the selected side frame. This is likely to be the most fiddly part of the insertion process. Use the Gasket Insertion Tool to 'roll' the wedge gasket into position. The wedge gasket insertion tool is designed so that the gasket will not be pushed too far into the side frame. 1  2  3  4  28. If you are right-handed it is easier to move along the frame from 'Right' to 'Left' rocking/rolling the Insertion Tool stepping along by small amounts (less than 10mm) each roll. 29. This process is something that you will get better at as you progress and you will 'be able to 'feel' when the wedge gasket is inserted correctly. 30. It is always advisable to check after each 'rolling-step' (in the initial stages of wedge gasket insertion) that visually the wedge gasket is correctly inserted. 31. You may find that by the end of the Glazed frame where you are inserting the wedge gasket that the length of the wedge gasket has 'grown' in length. In order to make the insertion of the wedge gasket in the next section of the Glazed Frame it is advisable to trim the length back to the correct length (i.e where the length of the wedge gasket is directly aligned to the edge of the next section of Glazed Frame).
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29 (cont'd)	32. Before you trim the wedge gasket with the Stanley Knife leave the wedge gasket to cool for another 5 minutes. The reason for this is that if you trim the wedge gasket before it is cooled the wedge gasket will continue to cool and may shrink too much. Take care not to mark the glazing panel with the Stanley Knife. This is particularly important when Acrylic or Plate Polycarbonate is the Glazing Material. 33. When you have completed step 10 inspect the inserted gasket and if there are sections of the gasket that do not appear to be aligned/fully inserted; address these sections now. Repeat Steps 1. – 10. (above) for the remaining Glazed Frame sides.
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	<u>Stage 10: Assembling Glazing Frame – Frame 1, Right-Hand Frame (Stage 1.).</u> <i>Note:</i> <i>If your secondary glazing unit has been supplied with the Glazed Frames pre-assembled proceed to Step 33, Stage 10.</i>
30	Lay Main Components out on flat surface in the correct position and in the correct orientation. Main Components required: Label detail: • (2)off.400109SMITH09GFLHL • (1)off.400109SMITH09GFLVK • (1)off.400109SMITH09GFLVH Base Gaskets, Brush Gaskets and Packer pre-assembled. It is important that before assembly that these components are laid out in flat area with the components oriented correctly so that: • The Base (Retained) Gaskets are all located on one side of the frame. • The brush gaskets are located in the correct orientation. • The Glazing Frame sections are in the correct position and correctly oriented. See next page for diagrams that will help you get this alignment right.

30
 (cont.d)

Please refer to the following diagrams to ensure that location, position and alignment of the (above) Glazing frame components are correct.

DIAGRAM 1.

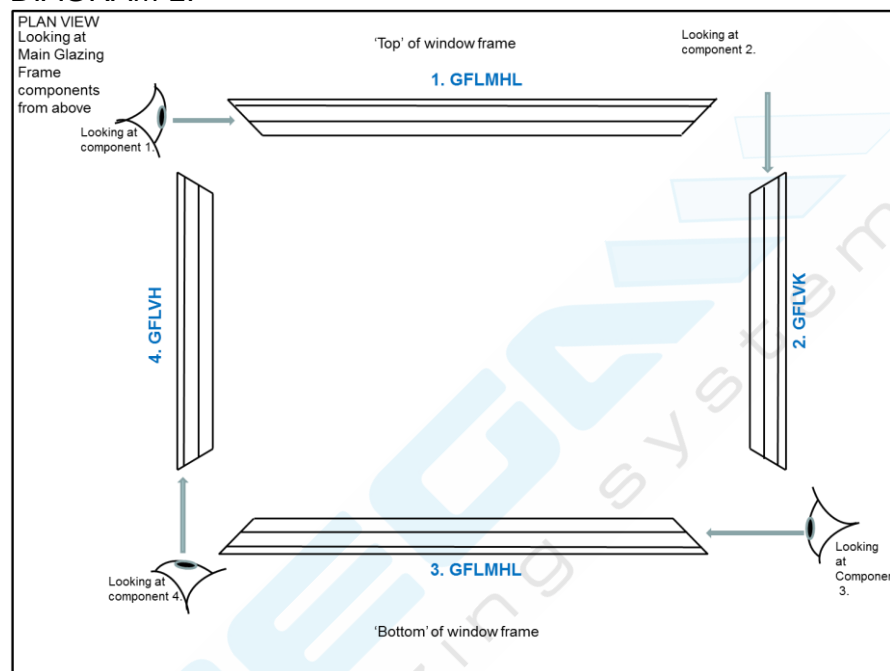
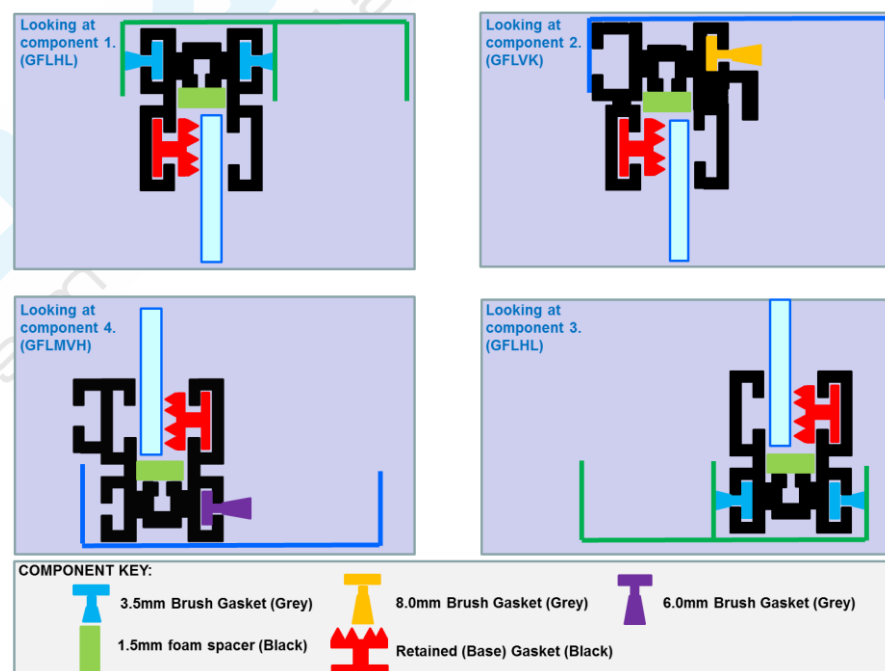
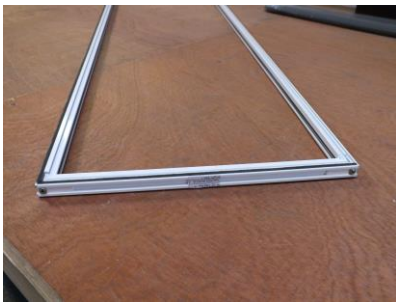
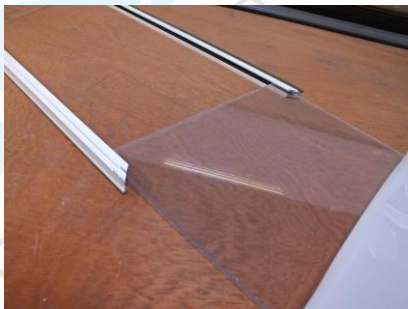
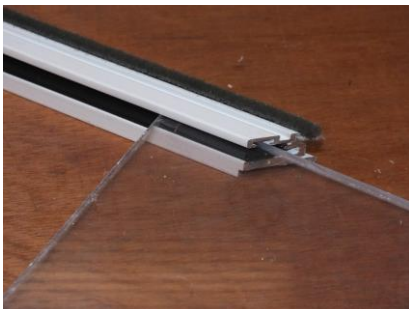


DIAGRAM 2.



31	Screw (3) of the Glazing Frames together. <u>Note:</u> We find that it is easier to assemble (2) longer glazing frame components together with (1) shorter glazing frame component. This makes the insertion of the glazing panel easier to manage in the next step. 16. Ensure that the Glazing Frame components are in the correct position and orientation (see previous Step 17.). 17. Make sure that when beginning to screw the (2) Glazing Frame components together that the gaskets do not overlap the ends of the glazing frame components and interfere with the mitre joint. 18. Use Philips Head Self-Tapping Screws supplied. Use 2PH Philips Head Screwdriver.(you could use a driver, but, a screwdriver for this operation is much easier to control and reduces the opportunity to mis-align the components and self-tapping screw. 19. Make sure that the self-tapping screw is used in conjunction with the Glazing Frame Corner Bracket.at each glazing frame corner joint. 20. Make sure that the self-tapping screw enters the screw port of the glazing frame component at right angles to the screw port.   This can be a little fiddly (holding the (2) glazing frame components, corner bracket and self-tapping screw in the correct positions. There is a knack that you will quickly acquire as you do more corner assemblies. Screw the self-tapping screw completely home. You will notice that the self-tapping screw will stop turning when applying the same 'torque' when 'home'. The mitre joint should be neat , with no variation in the joint line. The corner bracket will sit neatly within the channels of the (2) glazing frame components.
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	<u>Stage 11 Installing Glazing Panel to Glazing Frame1 and Stage 2 (Final) Assembly of Glazing Frame 1.</u>
32	Insert glazing panel into partially assembled Glazing Frame. 16. If you are using glass make sure that you are using protective gloves that offer some level of grip. The ideal gloves have rubber dimples on the gripping sides of the glove. 17. Make sure that the partially completed frame has the retained (base) gasket in the same and correct side of all (3) glazing frame components. It is easiest to slide the glazing panel on top of the retained (base) gasket. 18. 'Roll' back the protective film from both sides of the glazing panel so that the protective film cannot be trapped in the glazing frame channels. This must be done before the the glazing panel is pushed into the glazing frame assembly. 19. Another person is helpful. One person can 'push' the glazing panel into position in the glazing frame. The second person can help guide the glazing panel into the glazing frame and keep the glazing panel in the glazing frame channels. 20. Push the glazing panel 'home'. This position is where the glazing panel is 'butted' upto the spacer in the glazing frame component channel.    

33 Assemble 4th. Glazing Frame Component to partial Glazed Frame Assembly (with glazing panel inserted).

The process is the same as described in Step 18.



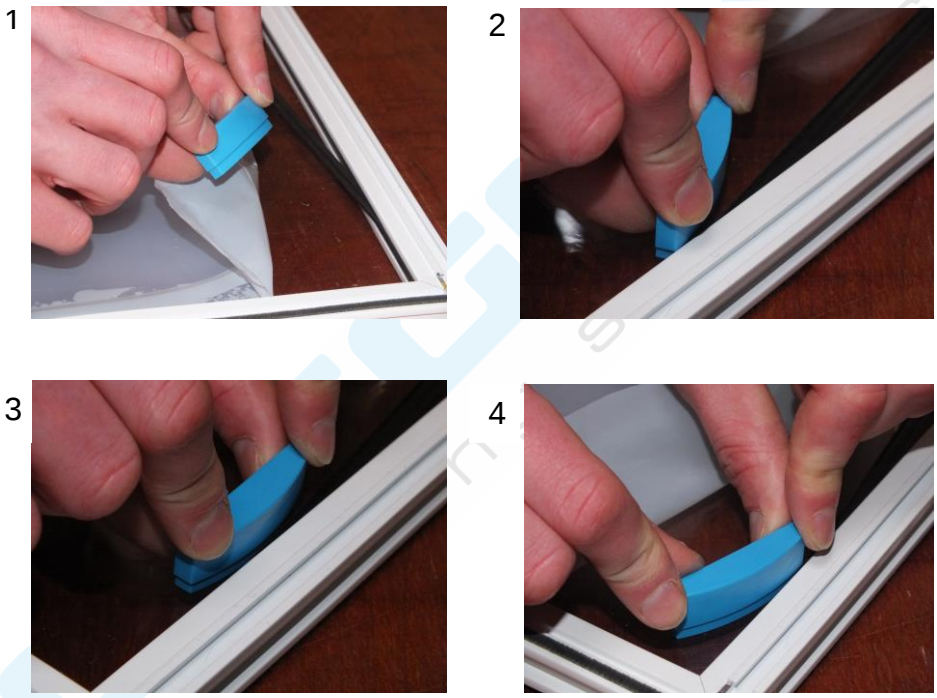
THIS IS IMPORTANT

When you are happy that you have completed the assembly of the Right-Hand Glazed Panel file off the corners of the outer glazed frame on the bottom side (this is the side that will slide on the slider).

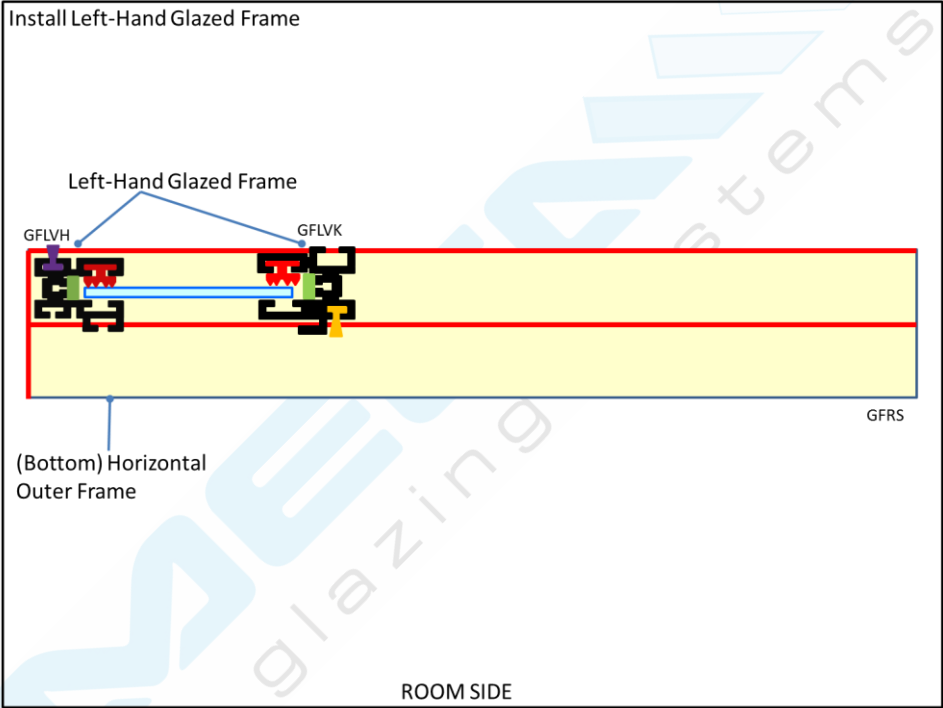
This eliminates any sharp corner that can 'shave' off the material of the slider.



34	Insert Wedge Gasket The Wedge Gasket is supplied in one length for the complete secondary glazing unit. Enough is supplied for both Glazed Frames. <i>This Step is probably the most difficult aspect of the whole installation.</i> It is best to: 13. Be clear about the detail of this process. 14. Take your time. 15. Make sure that you have room to manoeuvre and access all of the Glazed Frame side that you are working on. 16. Have all of the tools that you need to hand. The installation of the Wedge Gasket is best undertaken on a flat surface, ideally at waste height with room to manoeuvre around the Glazed Frame. You will need to use a Stanlet Knife and the Wedge Gasket Insertion Tool (supplied). It will be useful to have a bowl of hot, soapy water to make the insertion of the Wedge Gasket easier. 34. Select the side of the Glazed frame on which to insert the wedge gasket. make sure that this is not the side with the installed Base (Retained gasket). 35. Measure the required length of wedge gasket required using the wedge gasket supplied against side frame into which it will be fitted. Cut this length of wedge gasket using the Stanley Knife. The cut should be 'square'. 36. Put the cut length of wedge gasket into the bowl of hot/soapy water. Note: Try Step 5 before immersion of the wedge gasket in the hot, soapy water. You may find that the insertion of the wedge gasket does not require (this) lubrication. 37. Remove the cut length of wedge gasket from the bowl after a couple of minutes. This lubricates the wedge gasket and softens it to make it more flexible and therefore ease the insertion of the wedge gasket.
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34 (cont.d.)	38. Begin insertion of the wedge gasket from one end of the selected side frame. This is likely to be the most fiddly part of the insertion process. Use the Gasket Insertion Tool to 'roll' the wedge gasket into position. The wedge gasket insertion tool is designed so that the gasket will not be pushed too far into the side frame.  39. If you are right-handed it is easier to move along the frame from 'Right' to 'Left' rocking/rolling the Insertion Tool stepping along by small amounts (less than 10mm) each roll. 40. This process is something that you will get better at as you progress and you will 'be able to 'feel' when the wedge gasket is inserted correctly. 41. It is always advisable to check after each 'rolling-step' (in the initial stages of wedge gasket insertion) that visually the wedge gasket is correctly inserted. 42. You may find that by the end of the Glazed frame where you are inserting the wedge gasket that the length of the wedge gasket has 'grown' in length. In order to make the insertion of the wedge gasket in the next section of the Glazed Frame it is advisable to trim the length back to the correct length (i.e where the length of the wedge gasket is directly aligned to the edge of the next section of Glazed Frame).
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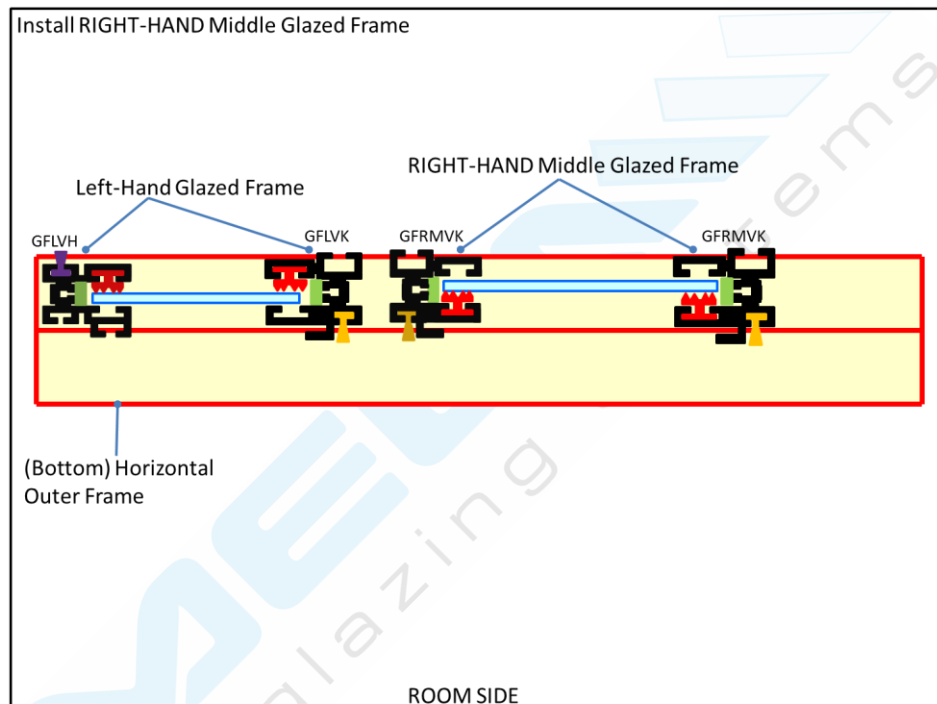
34 (cont'd)	43. Before you trim the wedge gasket with the Stanley Knife leave the wedge gasket to cool for another 5 minutes. The reason for this is that if you trim the wedge gasket before it is cooled the wedge gasket will continue to cool and may shrink too much. Take care not to mark the glazing panel with the Stanley Knife. This is particularly important when Acrylic or Plate Polycarbonate is the Glazing Material. 44. When you have completed step 10 inspect the inserted gasket and if there are sections of the gasket that do not appear to be aligned/fully inserted; address these sections now. Repeat Steps 1. – 10. (above) for the remaining Glazed Frame sides.
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	<u>Stage 12 – Installing Glazed Frames into Outer Frames</u>
35	Install Left-Hand Glazed Frame first. (as viewed from inside the room). The Left-Hand Glazed Frame is installed into the Horizontal Outer Frame channel closest to the existing window (as viewed from inside the room). Install Left-Hand Glazed Frame  Insert Left-Hand Glazed Frame upwards into the top Horizontal Outer Frame first. Then tilt towards the existing window and lower into the bottom Horizontal Outer Frame.

36

Next, install **Right-Hand Middle** Glazed Frame.
(as viewed from inside the room).

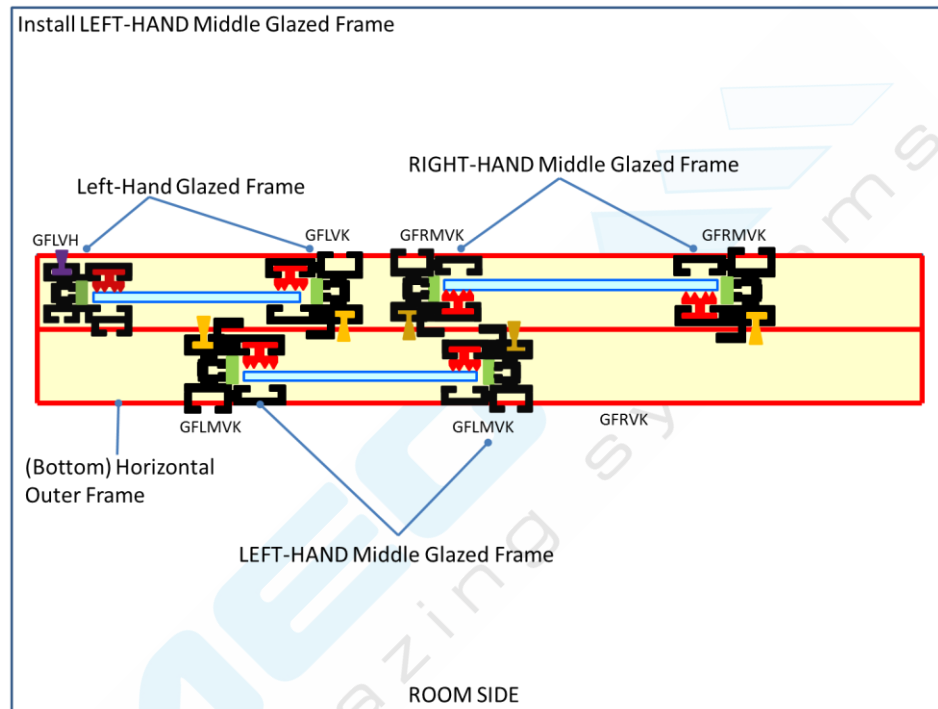
The Right-Hand Middle Glazed Frame is installed into the Horizontal Outer **Frame channel Closest** to the existing window (as viewed from inside the room).
Install to the right of the already installed Left-Hand Glazed Frame.



Insert Right-Hand Middle Glazed Frame upwards into the top Horizontal Outer Frame first.
Then tilt towards the existing window and lower into the bottom Horizontal Outer Frame.

37	Next, Install Left-Hand Middle Glazed Frame.
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The Left-Hand Middle Glazed Frame is installed into the Horizontal Outer **Frame channel closest** to the inside of the room. (as viewed from inside the room).



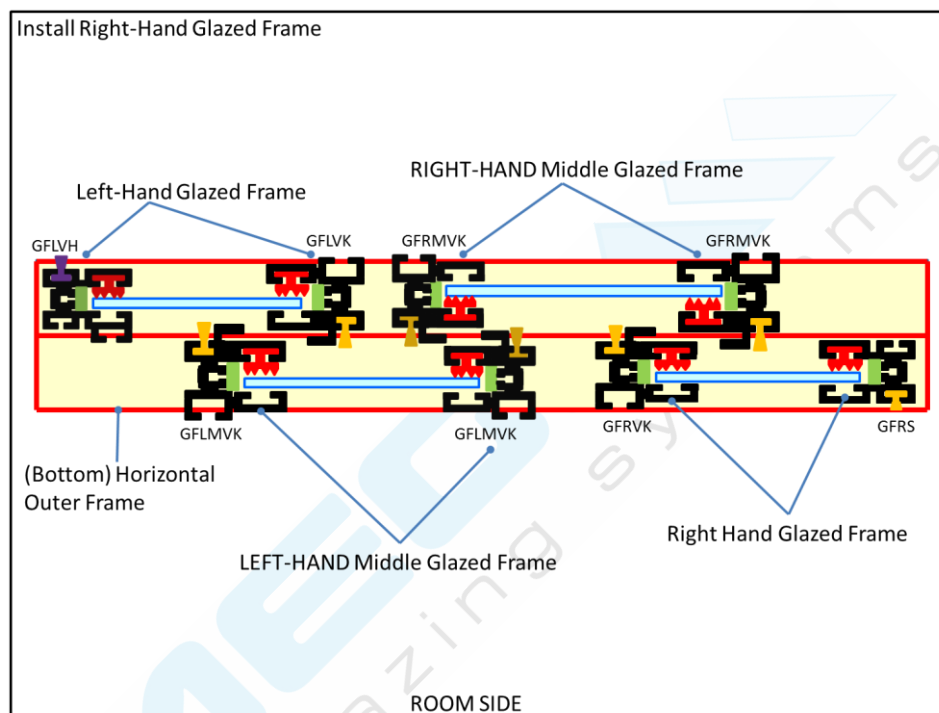
Insert Left-Hand Middle Glazed Frame upwards into the top Horizontal Outer Frame first.
Then tilt towards the existing window and lower into the bottom Horizontal Outer Frame.

The Left-Hand Middle Glazed Panel is located so that it overlaps both the Left-Hand and Right-Hand Middle Glazed Panels.

39

Finally, Install **Right-Hand** Glazed Frame.

The Right-Hand Glazed Frame is installed into the Horizontal Outer **Frame channel closest** to the inside of the room. (as viewed from inside the room).



Insert Right-Hand Glazed Frame upwards into the top Horizontal Outer Frame first.
Then tilt towards the existing window and lower into the bottom Horizontal Outer Frame.

The Right-Hand Glazed Panel is located so that it overlaps the Right-Hand Middle Glazed Panel.

Slide the Left-Hand and Right-Hand Glazed panels outwards. These panels will lock into the Middle Glazed Panels and the 4 glazed Panels will align so that the brush seals seal against the outer frame and the glazed panels providing an airtight seal.

Ensure that:

- The 4 glazed panels slide freely and smoothly.
- The glazed panels do not 'shave' the slider when sliding.

40 Assemble Handles to Glazed Frames.

The handles are supplied assembled together with an M4 Set Screw.

The handle and Set Screw are located:

- (1) Left-Hand side of both Left-Hand Glazed Frame.
- (2) Left-Hand side of Left-Hand Middle Glazed Frame.
- (3) Left-Hand side of Right-hand Middle Glazed frame.

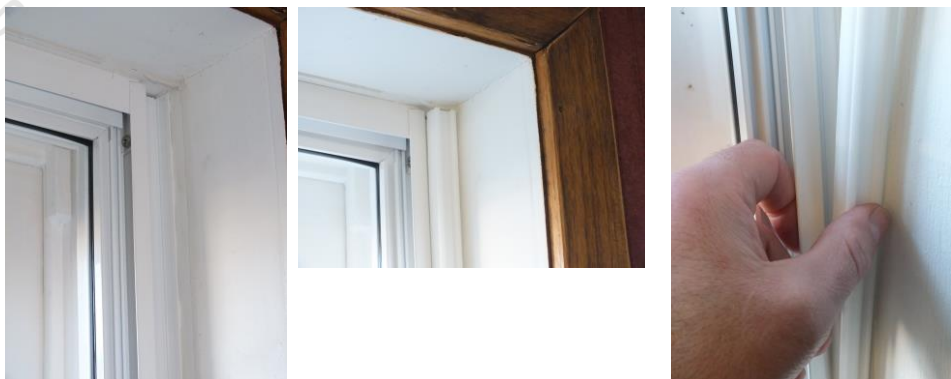
The hexagonal head of the Set Screw locates into the 'Set-Screw channel' in the Right-Hand vertical frames of the Glazed Frames. The Set-Screw/Handle assembly will fit into the 'Set-Screw Channel' with the Glazed Frames 'installed' in the Outer Frame.

When positioned in the final position the cylindrical handle can be tightened (turned clockwise) until tight.

The final position is established by partially tightening the handle in various positions and sliding the panel.

The final position will be within a range where the panel does not tilt when moved in either (right or left) direction.



	<u>Stage 13 – Finishing Outer Frame/Window Reveal Join.</u>
41	Finish the 'join' between the Outer Frames of the new Secondary Glazing Unit and Existing Window Reveal. In most installations (where the window reveal is square and level) the 'gap' between the existing window reveal and the outer frames of the new secondary glazing unit will be small and uniform. Finish this 'gap' with a silicone sealant.  If the 'gap' described (above) is variable and wider (+4mm) then it maybe more appropriate to apply some proprietary trims. Finally, remove the protective film (if glazing material is Plate Polycarbonate or Acrylic) from both sides of the glazing panel.
42	Install Slider/Finisher as finisher into Vertical Outer Frames. These components will be supplied slightly longer than required. Present the finisher to the vertical outer frame and mark the length required. Cut the finisher to the length required using Stanley Knife. Push the finisher into the recess in the vertical outer frame. The sides of the finisher should be flush with the vertical outer frame. 

14 Care and Maintenance

Your Omega Secondary Glazing Unit will require very little care and maintenance.

The aluminium frames are powder coated in polyester.

The glazing panels can be:

1. Acrylic.
2. Plate Polycarbonate, or
3. Glass.

Cleaning

1. The metalwork can be cleaned with a soft cloth and soapy water.
2. The Polycarbonate or Acrylic Glazing Panels can be cleaned:
 - a. Gently wash sheet with a solution of mild soap and lukewarm water, using a soft, grid-free cloth or sponge to loosen any dirt or grime.
 - b. Fresh paint splashes, grease and smeared glazing compounds can be removed easily before drying by rubbing lightly with a soft cloth using petroleum ether (BP65), hexane or heptane. Afterwards, wash the sheet using mild soap and lukewarm water.
 - c. Scratches and minor abrasions can be minimised by using a mild automobile polish. Test on a small area of sheet before using on the entire sheet is recommended.
 - d. Finally, thoroughly rinse with clean water to remove any cleaner residue and dry the surface with a soft cloth to prevent water spotting.
3. Glass Glazing Panels can be cleaned using proprietary glass cleaners.

Operation:

The sliding operation of the Glazed panels can be improved with the application of **Dry Lube Spray Silicone Lubricant** to the sliders located in the bottom Horizontal Outer Frame.

There are various proprietary brands available (200ml aerosols or larger)

Other important instructions for Polycarbonate and Acrylic Glazing Panels:

1. Never use abrasive or highly alkaline cleaner on polycarbonate materials.
2. Never use aromatic or halogenated solvents like toluene, benzene, gasoline, acetone or carbon tetrachloride on polycarbonate materials.
3. Use of in with polycarbonate sheet can cause structural and/or surface damage.
4. Contact with harsh solvents such as methyl ethyl ketone (MEK) or hydrochloric acid can result in surface degradation and possible crazing of polycarbonate sheet.
5. Never scrub with brushes, steel wool or other abrasive materials.
6. Never use squeegees, razorblades or other sharp instruments to remove deposits or spots.
7. Do not clean polycarbonate in direct sunlight or at high temperatures as this can lead to staining.
8. For all mentioned chemicals consult the manufacturers' material safety data sheets for proper safety precautions.