Fitting of Subcill with Applied Nose

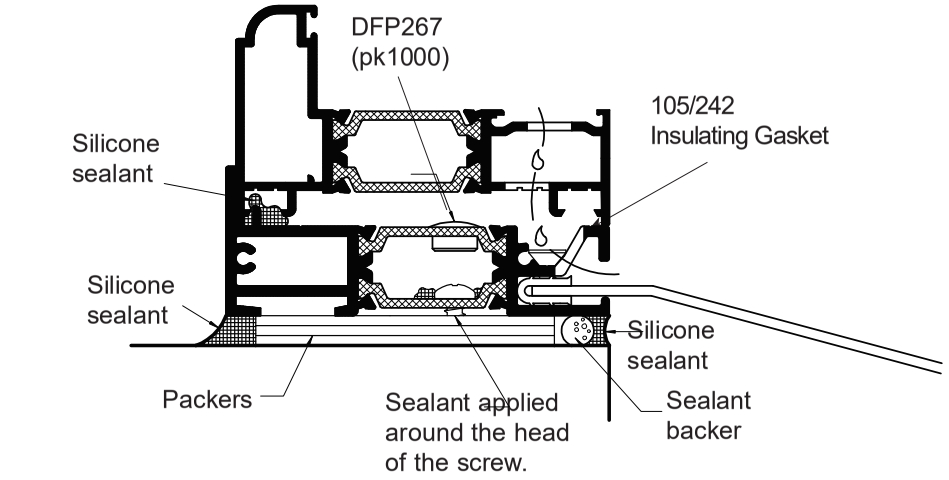
Drainage paths through the subcill are as shown below right, care must be taken to ensure that they do not become blocked when fitting.

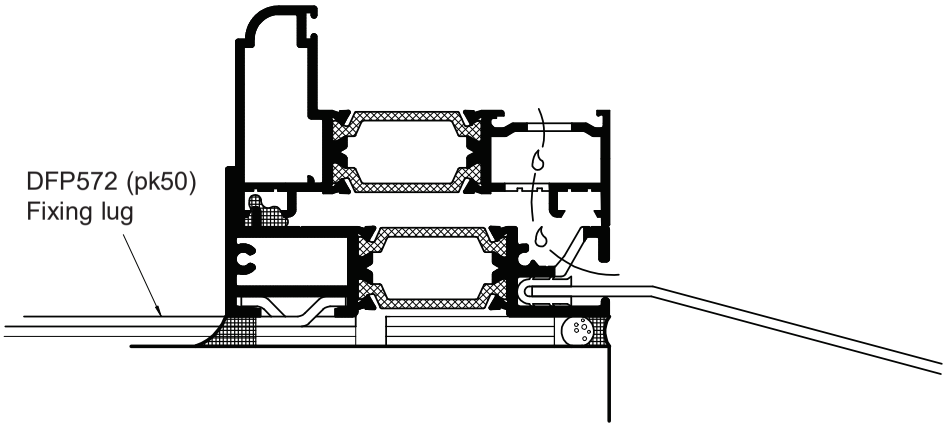
The subcill must be secured to the structure as shown, using suitable fixings, and packed as necessary to ensure it is level.

The subcill must then be sealed to the structure along its length and across its ends. DFP267 (pk1000) hole plugs must be sealed into the clearance holes in the top of the subcill after it has been secured to the structure.

The pressed nosing should now be offered into position with the 105/242 having been pre-applied to the pressing. Once the pressing has been pushed fully home No.6 Csk screws should be applied through the subcill and the nose to achieve final retention these should be at a maximum of 600mm centres. A bead of sealant should then be applied along the ends of the subcill at the point that it abuts the structure. Note that additional packing may be required if the nose pressing is particularly large to prevent sag.

When fitting the frame to the subcill silicone sealant must be gunned as shown alongside to ensure that a watertight joint is created on the inside of the frame. Do not apply silicone sealant along the front face as this will block the drainage slots in the subcill.





INSTALLATION

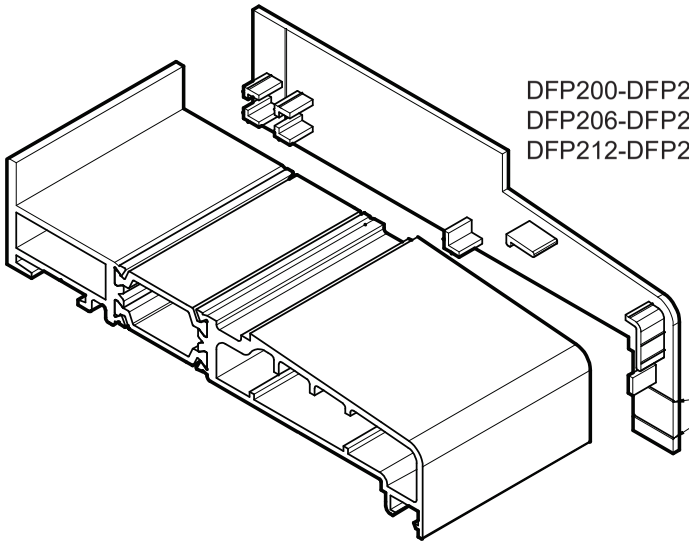
Fitting of Subcill

Drainage paths through the sub-cill can be seen on the illustration alongside so care must be taken to ensure they are not obstructed and that screw fixings do not penetrate these areas.

When fitting the frame to the subcill silicone sealant must be gunned as shown to ensure that a watertight joint is created on the inside of the frame.

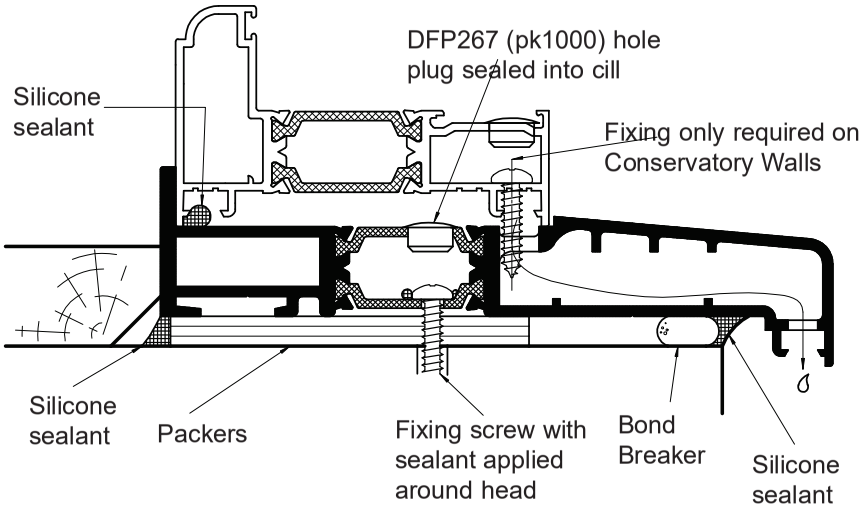
Apply silicone sealant or small gap sealer to each end cap and push into position, as shown below.

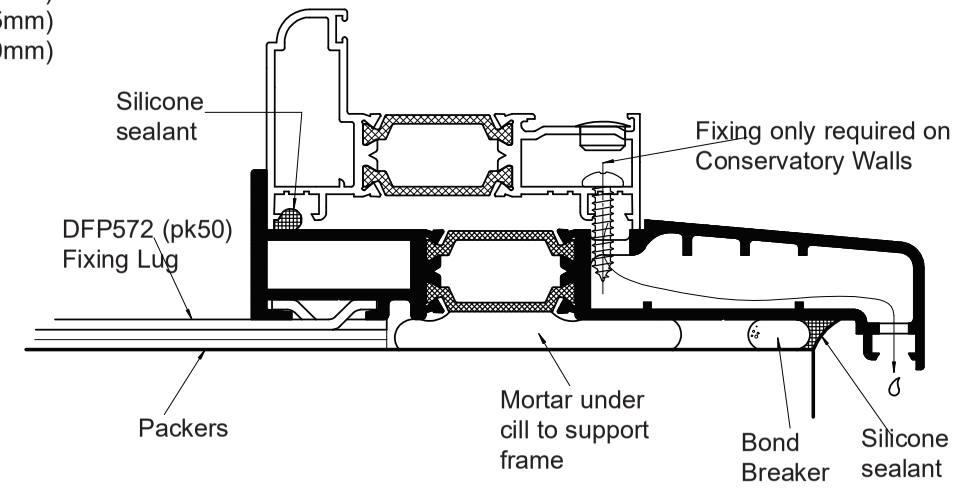
On conservatory walls only, an additional fixing must be located as shown alongside to secure the window to the subcill. Seal under the head of the screw to prevent water ingress and seal DFP267 (pk1000) hole plug in position.



DFP200-DFP201 (pk20) for DF703 (135mm)
DFP206-DFP207 (pk20) for DF704 (155mm)
DFP212-DFP213 (pk20) for DF705 (190mm)

"V" groove to allow moulding to be broken off depending on leg extension used





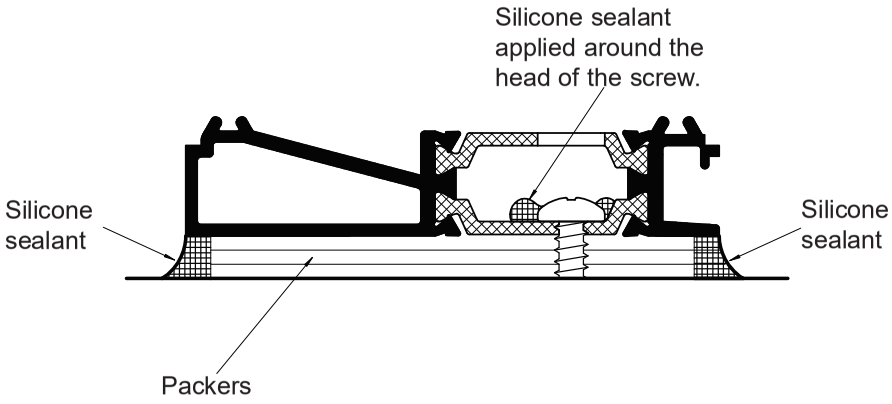
Fitting of Drainage Tray

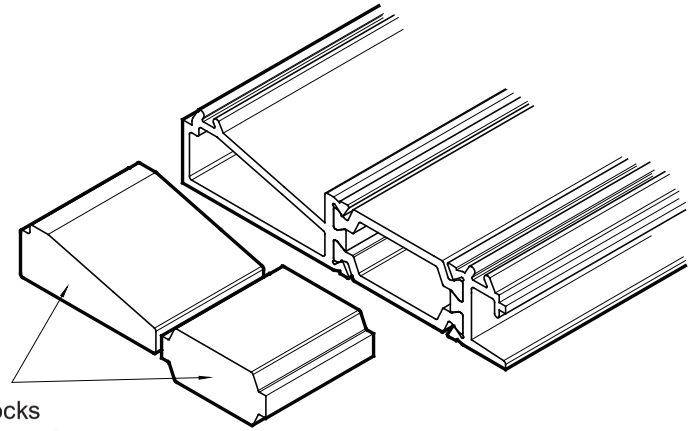
Drainage paths through the drainage tray are as shown opposite, care must be taken to ensure that they do not become blocked when fitting.

The drainage tray must be secured to the structure as shown, using suitable fixings, and pack as necessary to ensure it is level.

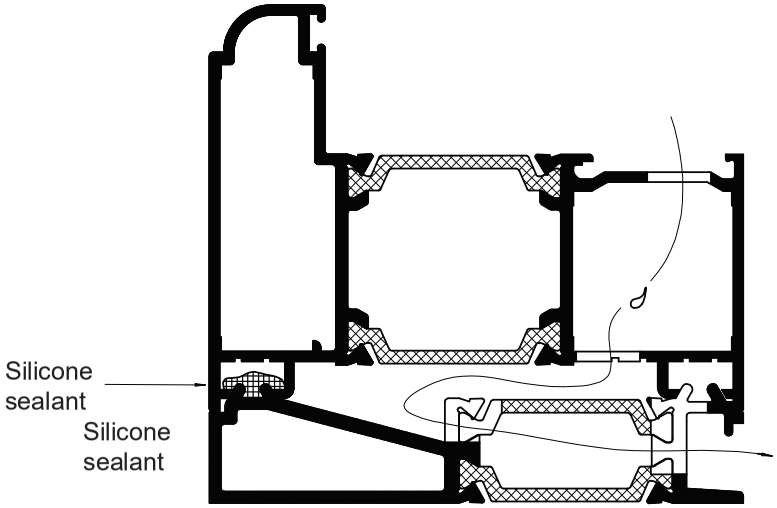
The drainage tray must then be sealed to the structure along its length and across its ends. Take care to ensure that the portion of the drainage tray that adjoins the jambs of the structure are adequately sealed, to prevent water running off of the end of the drainage tray and into the building.

When fitting the frame to the drainage tray silicone sealant must be gunned as shown alongside to ensure that a watertight joint is created on the inside of the frame.





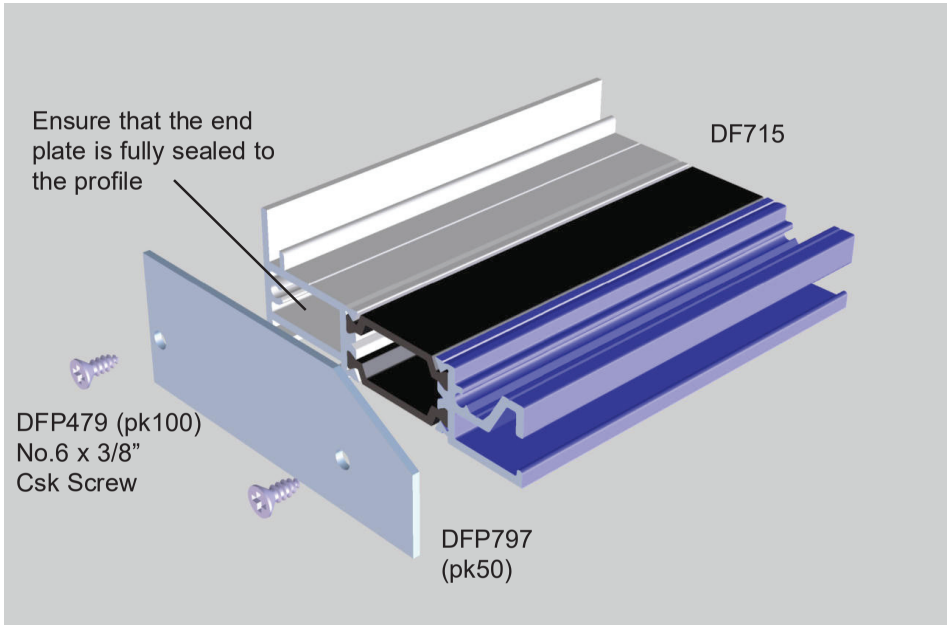
Plastazote blocks sealed into the ends of the drainage tray from DFP286 (pack of 50 pairs)



INSTALLATION

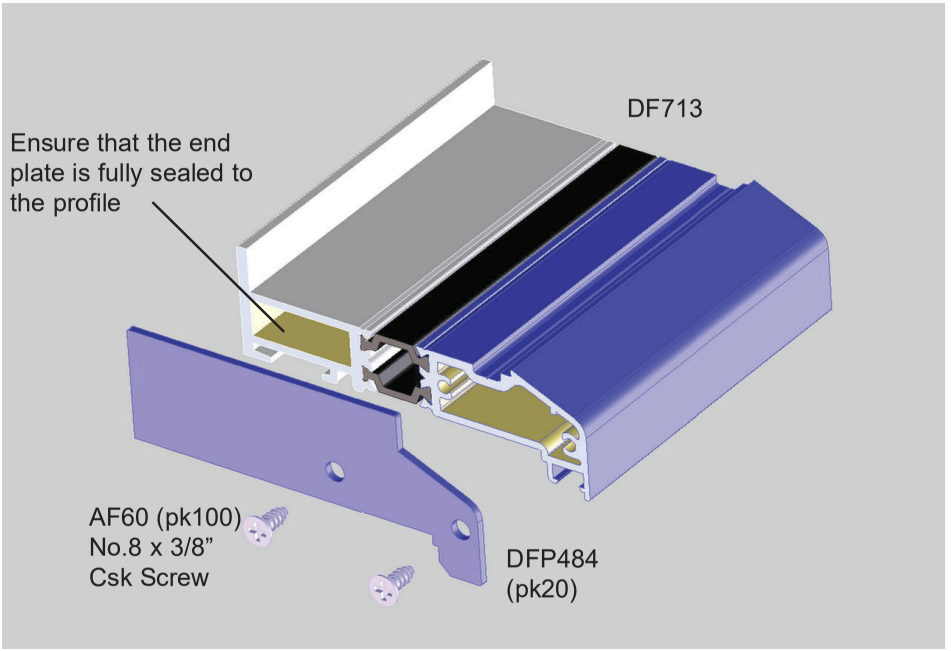
Assembling the Applied Nose Subcill

The DF715 subcill must have the DFP797 (pk50) aluminium end plate sealed and screwed to each end of the profile. Care must be take to ensure that the end of the subcill is fully sealed to the plate to prevent any water that enters the subcill penetrating to the structure. Note also that these items are always supplied in mill. The DFP797 (pk50) should be secured using 2 off No.6 x 3/8" Csk screws.



Assembling the 100mm Subcill

The DF713 subcill must have the DFP484 (pk20) aluminium end plate sealed and screwed to each end of the profile. Care must be take to ensure that the end of the subcill is fully sealed to the plate to prevent any water that enters the subcill penetrating to the structure. The DFP484 (pk20) should be secured using 2 off No.8 x 3/8" Csk screws.



Fitting Frame To Aperture

Prior to installing the frame, the opening should be checked to ensure that it is free of debri, and that any projecting brickwork has been trimmed back.

Any damaged damp proof membranes should be replaced or additional membranes incorporated.

When the opening was originally measured a suitable gap should have been allowed around the window, this will allow the window to be packed to ensure that it is plumb and square within the opening.

Ideally the frame should be bedded on mortar.

The frame can then be positioned in the opening and held square by packing at the very corners of the frame, taking care not to damage or deform the window profiles.

To check for squareness, measure the diagonals from corner to corner, these diagonal dimensions should not differ by more than 1 or 2mm, if they do then adjust the packing until the frame is square within the opening.

The lay of the frame in to out can be checked by using a spirit level on the jambs. The correct position of the frame might not align with the original. Which will require some remedial work to make good the plaster reveal around the frame on the inside as well as any render that is present on the outside.

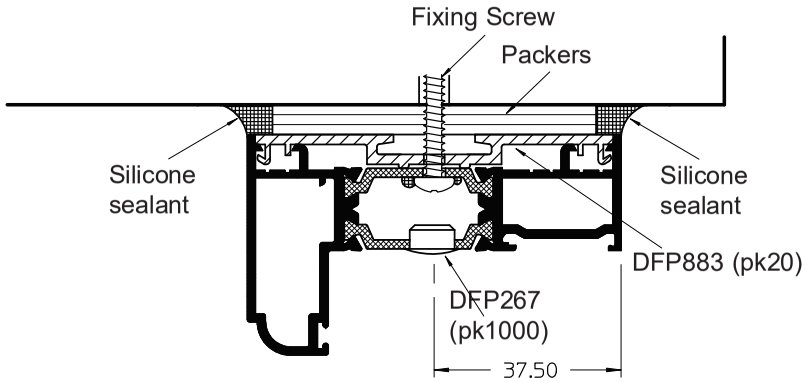
INSTALLATION

Fixing of Frames - Screw Fixing

The first fixing must always occur within 150mm of the corner of the unit then at not more than 600mm centres (do not overtighten fixings), the type and frequency depends on the expected applied loadings. Any fixed lights that have been glazed may need to be deglazed to allow access for fixing.

Packing will be required at the fixing points to prevent distortion of the frame. Drilled holes in the frame should be sealed where there is a possibility of moisture penetration around the screw.

Note that Sapa recommend the use of DFP883 (pk20) outerframe brace, this item is used at screw fixing centres for positive fixing (see detail opposite).



Fixing of Frames - Foam Fixing

Fixing foam can be used with both screw or lug fixing.

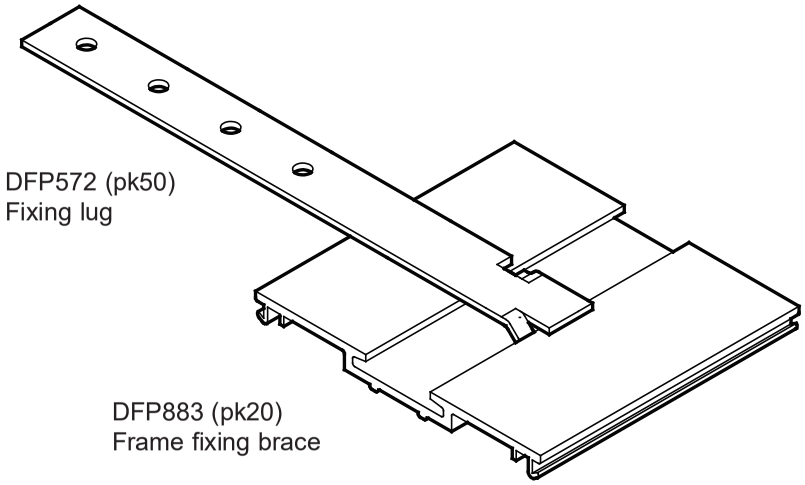
Care must be taken not to allow the foam to come in contact with the painted finish, and as such the use of some form of masking tape would be advisable. Permanent staining will be caused if the foam contacts the frame.

Fixing of Frames - Lug Fixing

Lug fixings should be spaced at the same intervals as the screw fixings. First clip in frame fixing brace DFP883 (pk20), now twist in fixing lug DFP572 (pk50) into the frame brace, see opposite.

On replacement windows, plaster on the internal reveal will have to be removed in the vicinity of the lug and made good after.

Packing the frame around the lug would be advisable to stabilise the frame.

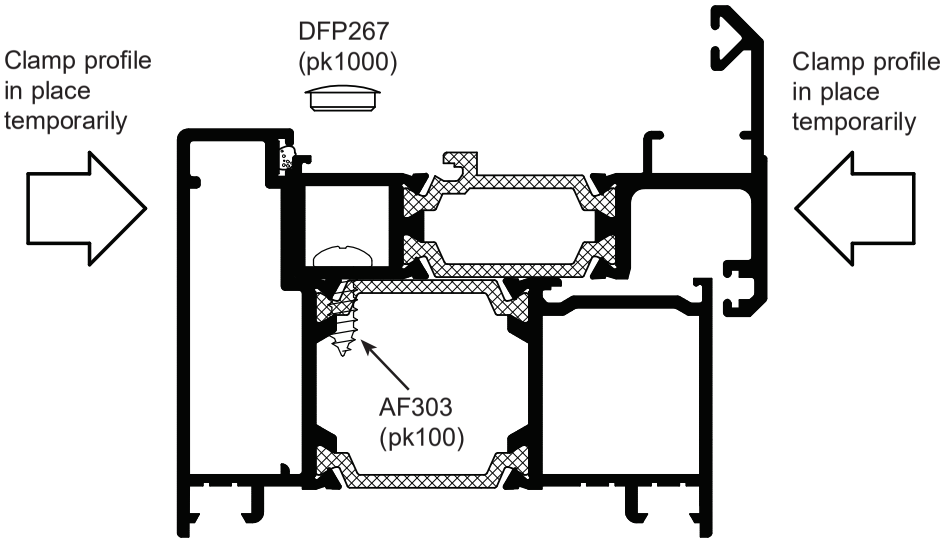


Fitting of Internal Glaze Dummy Vent

The internal glaze dummy vent must be fitted after the frame has been fixed.

Offer dummy vent into frame aperture. Temporarily clamp into position on all four sides to compress the inner weatherseal. Drill 3.5 dia holes through the holes already prepared in the dummy vent into the frame. Fix using No. 8 x 1/2" pan pozi self tapping screws, AF303 (pk100).

At the cill only, fit and seal into position, DFP267 (pk1000) hole plugs.



Finishing Off

Sealing

The recommended sealant for the exterior is Low Modulus Neutral Cure Silicone Sealant. Backing foam should be used where the perimeter gap is over 5mm. Where the gap is within the 5mm range; a neat application of silicone is all that is required on the outside, alternatively a flipper seal (A3004) can be fitted around the outerframe to fill unwanted voids.

A final check of the internal and external perimeter seals should be undertaken. Any weak spots that are identified should be rectified and tooled to a high visual finish. Any excess sealant must be cleaned off of the finished surfaces using appropriate cleaner.

Cleaning after installation

If excess sealant is to be cleaned off. Ensure that any solvent used will not damage any of the metal finishes, synthetic rubbers or plastics which may be present.

Warning

Take particular care if there is any cement or plaster on the aluminium. It is harmful to the metal finish and should be washed off while still wet. DO NOT RUB or particles of grit will permanently damage the metal or paint finish.

Routine cleaning

No aluminium finish is "Maintenance Free" and hence should be cleaned at regular intervals. See surface treatment suppliers literature/website for cleaning and maintenance requirements.

Maintenance

Periodic maintenance must be carried out on the locking gear as specified by Maco Ltd. And periodic maintenance is also to be performed on the friction stays as per recommendations by Securstile.

Note that in marine & environmentally corrosive environments, the maintenance procedures must be repeated more frequently (ideally twice the frequency as specified).

INSTALLATION

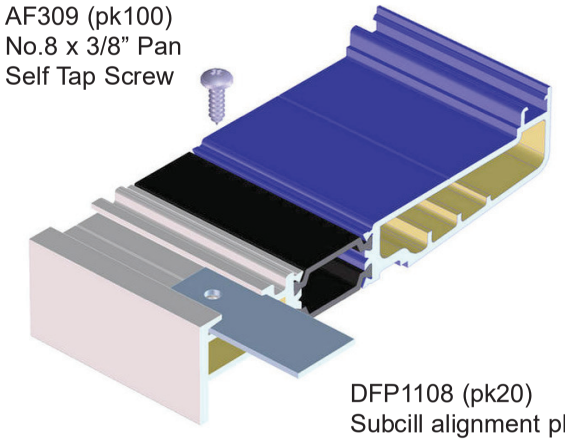
Subcill Expansion Joint

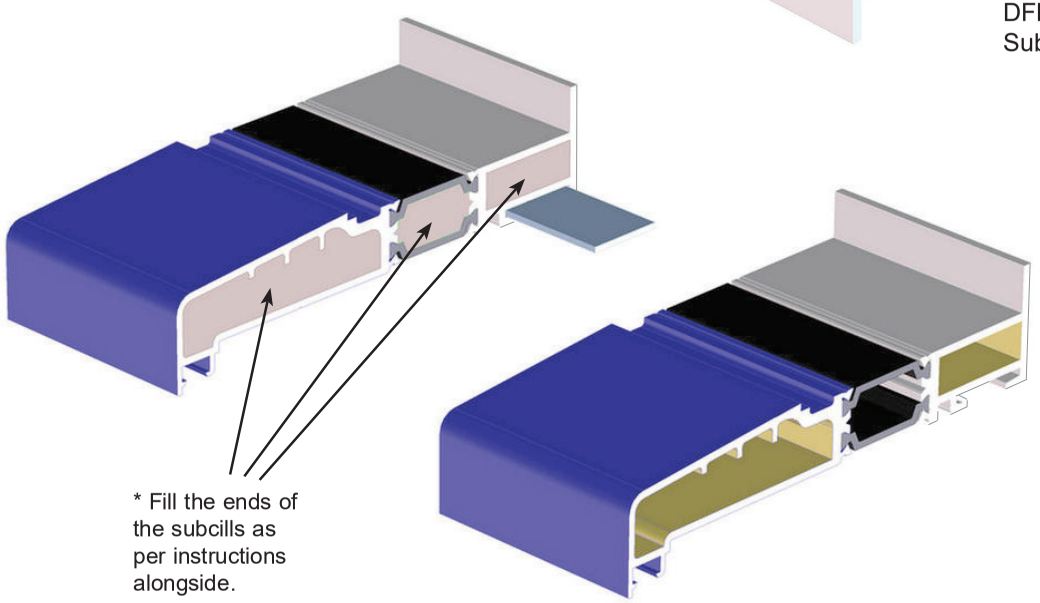
Wherever a cill exceeds 5m in length, an allowance must be made for thermal expansion. To achieve this, follow the details on this page, allowing an expansion gap of 10mm between subcill ends as shown.

First fit the subcill alignment plate with one No. 8 x 3/8" csk self tap screw, to the underside of one subcill only. This plate is used to align both subcills when they are positioned in-situ, and is only secured to one subcill to allow for thermal expansion.

* Now the ends of both subcills are to be fully filled with silicone sealant. Fill the voids in the ends of the subcills with foam backing strip, followed by silicone sealant and allow the sealant to cure. Just before the subcills are situated into the structure opening, trim back the sealant flush with the end of the subcills. Now whilst maintaining a 10mm gap between both subcills. Silicone sealant can now be applied into the joint between both cills and tooled to give a smooth appearance.

The quality of the seal is of upmost importance and is directly linked to the performance of the joint, and as such the sealant must be used in accordance with manufactures recommendations.



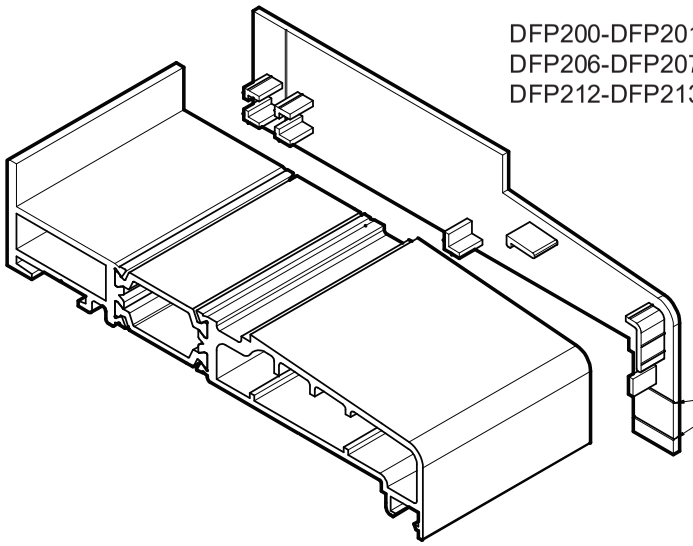


Assembling the Subcill

All joints must be assembled with silicone sealant. Sealing over the joint again after assembly in the area covered by the framework is recommended. Only clean sealant off of surfaces that will be visible.

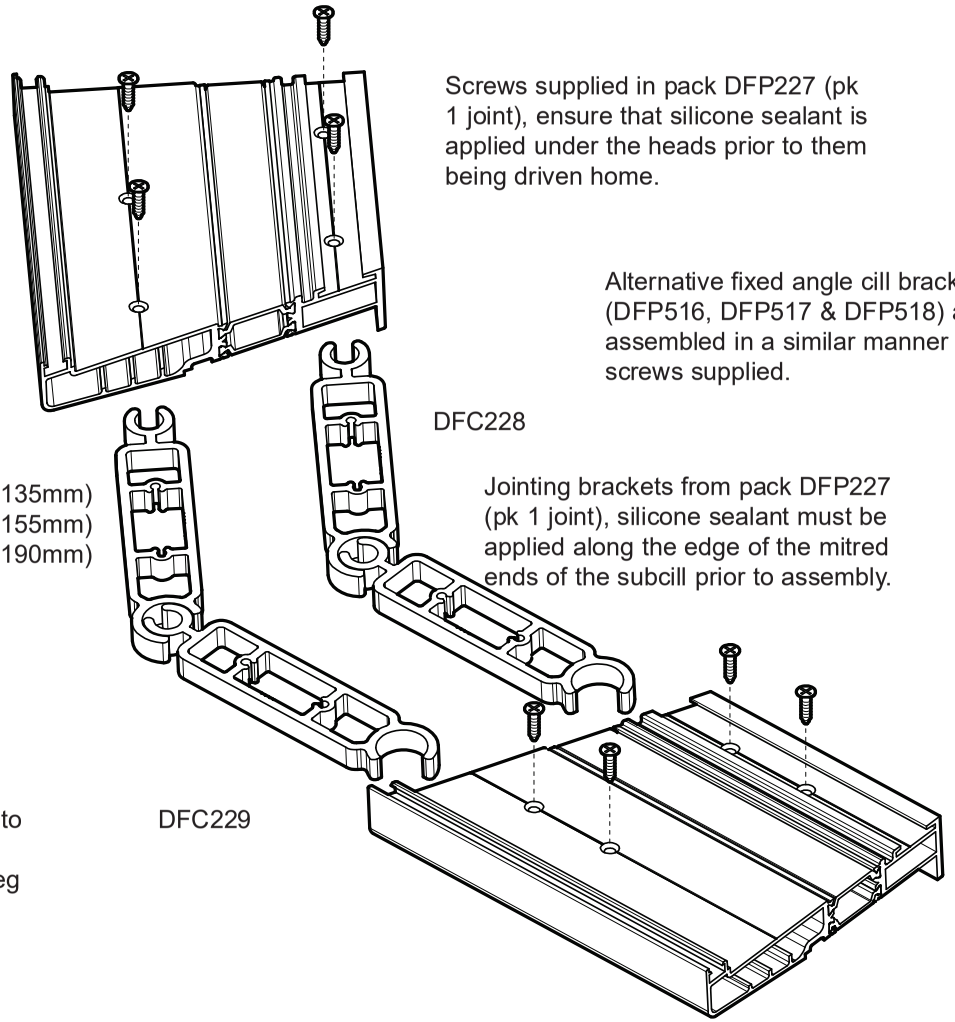
The cill end caps must be sealed into position with silicone or small gap sealer.

If the horns return into the wall (no end caps exposed) the cavity of the cill must be sealed off.



DFP200-DFP201 (pk20) for DF703 (135mm)
DFP206-DFP207 (pk20) for DF704 (155mm)
DFP212-DFP213 (pk20) for DF705 (190mm)

"V" groove to allow moulding to be broken off depending on leg extension used



Screws supplied in pack DFP227 (pk 1 joint), ensure that silicone sealant is applied under the heads prior to them being driven home.

Alternative fixed angle cill brackets (DFP516, DFP517 & DFP518) are assembled in a similar manner using screws supplied.

DFC228

Jointing brackets from pack DFP227 (pk 1 joint), silicone sealant must be applied along the edge of the mitred ends of the subcill prior to assembly.

DFC229

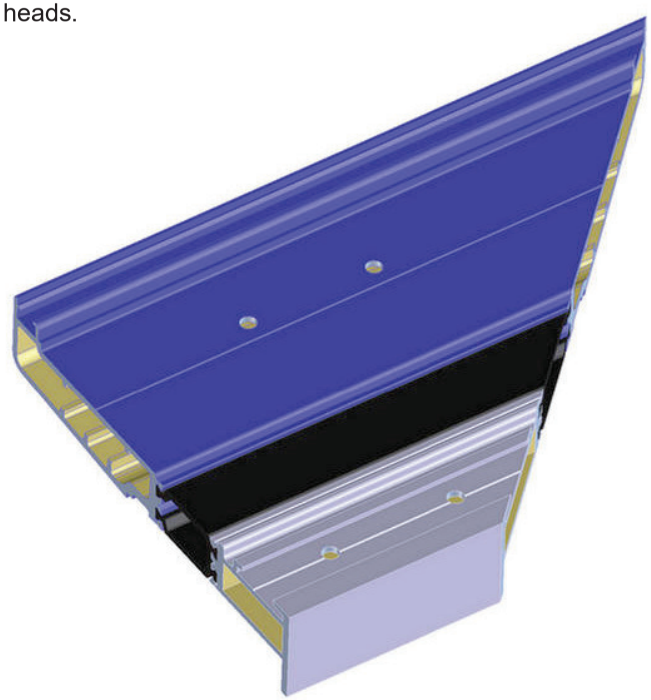
INSTALLATION - BAY WINDOW

Assembling 90° Subcill Corner

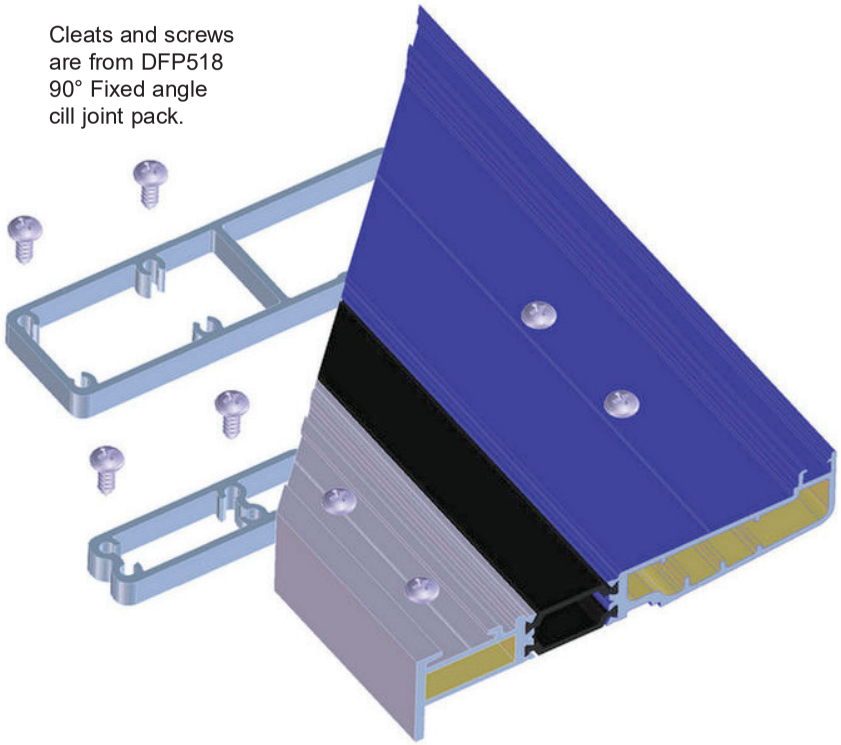
All joints must be sealed with silicone sealant. Sealing over the joint again after assembly in the area covered by the framework is recommended. Only clean sealant off of surfaces that will be visible.

Seal along the mitred ends of the subcill prior to assembly, then assemble with 90° cill joint cleat and screws DFP518 (pk1)

Best results for corner jointing is to start all 8 screws, then before final tightening of the screws apply sealant under the heads.



Cleats and screws are from DFP518 90° Fixed angle cill joint pack.



Fixing the Subcill - Screw Fixing

The cill must be fitted level and packed to avoid distortion.

Ideally the cill should be bedded on mortar.

Fixings should be 150mm from the cut ends and at 600mm max intervals between, the type and frequency depends on the expected applied loadings.

Avoid fixing through drainage paths.

Always apply sealant to screws during installation and seal over after fixing.

Fixing the Subcill - Lug Fixing

The cill can sit on the brickwork and levelled by packing.

Ideally the cill should be bedded on mortar.

The DFP572 (pk50) fixing lugs from the underside of the cill can then be fixed to the internal brickwork.

The lugs would be covered by the window board.

Coupling Frames

Silicone sealant can be applied to the clip feature during assembly and the excess cleaned off.

Fixings should be within 150mm from the end of the coupling mullion and at 300mm intervals between, the type and frequency depends on the expected applied loadings.

Fixings must be staggered from both frames into the mullion.

INSTALLATION - BAY WINDOW

Levelling the Framework

Careful attention must be paid to the level of the assembled frames.

Check that each facet is upright.

Check by sighting across the bay mullions from all directions looking for twist.

The initial care taken in levelling the cill will be evident at this stage.

Fixing the Framework - Screw Fixing

There should be a fixing within 150mm from each corner and then at no more than 600mm intervals around the frame (do not overtighten fixings), the type and frequency depends on the expected applied loadings. Any fixed lights that have been glazed may need to be deglazed to allow access for fixing.

Packing will be required at the fixing points to prevent distortion of the frame.

Drilled holes in the frame should be sealed where there is a possibility of moisture penetration around the screw.

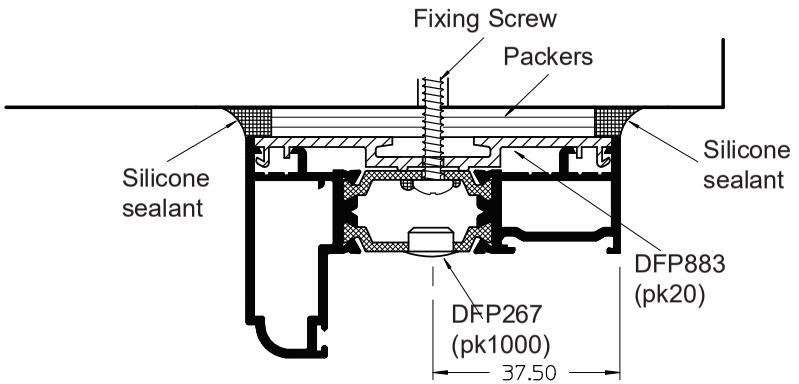
Note that Sapa recommend the use of DFP883 (pk20) outerframe brace, this item is used at screw fixing centres for positive fixing (see detail opposite).

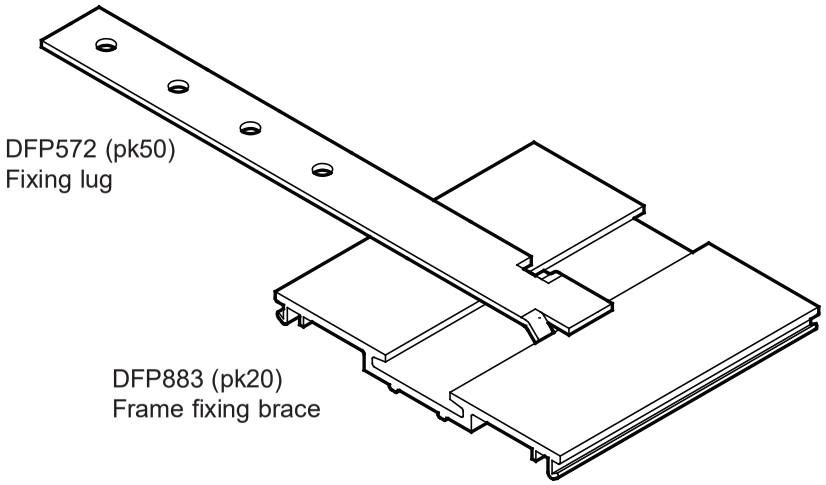
Fixing of Frames - Lug Fixing

Lug fixings should be spaced at the same intervals as the screw fixings. First clip in frame fixing brace DFP883 (pk20), now twist in fixing lug DFP572 (pk50) into the frame brace, see opposite.

On replacement windows, plaster on the internal reveal will have to be removed in the vicinity of the lug and made good after.

Packing the frame around the lug would be advisable to stabilise the frame.





Finishing Off

Sealing
The recommended sealant for the exterior is Low Modulus Neutral Cure Silicone Sealant. Backing foam should be used where the perimeter gap is over 5mm. Where the gap is within the 5mm range; a neat application of silicone is all that is required on the outside, alternatively a flipper seal (A3004) can be fitted around the outerframe to fill unwanted voids.

A final check of the internal and external perimeter seals should be undertaken. Any weak spots that are identified should be rectified and tooled to a high visual finish. Any excess sealant must be cleaned off of the finished surfaces using appropriate cleaner.

Cleaning after installation
If excess sealant is to be cleaned off. Ensure that any solvent used will not damage any of the metal finishes, synthetic rubbers or plastics which may be present.

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Routine cleaning
No aluminium finish is “Maintenance Free” and hence should be cleaned at regular intervals. See surface treatment suppliers literature/website for cleaning and maintenance requirements.

Maintenance
Periodic maintenance must be carried out on the locking gear as specified by Maco (uk) Ltd. And periodic maintenance is also to be performed on the friction stays as per recommendations by Securistyle.

Note that in marine & environmentally corrosive environments, the maintenance procedures must be repeated more frequently (ideally twice the frequency as specified).