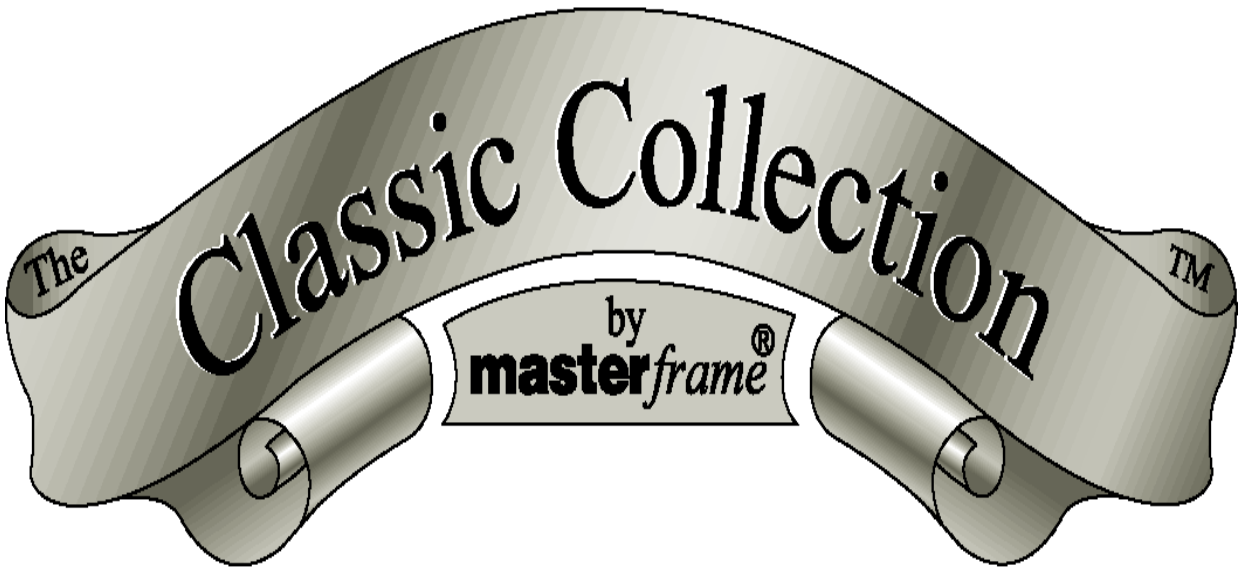

VERTICAL SLIDING WINDOW

INSTALLATION GUIDELINES

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Contents

Survey Notes

A good survey is the key to a quality installation.

The survey is the only technical vetting of the order, and it is therefore vital that all relevant information is captured from the survey, and that nothing is left to chance. The surveyor is therefore responsible for the following.

- Establishing the condition of the structural opening and the DPC, to receive the new window.
- Identifying all structural defects, apparent deficiencies, damp or existing cracks in the structure.
- Specifying the installation techniques.
- Preparing a schedule of all required ancillary items.
- Measuring the structural opening and determining the manufacturing sizes.
- Clearly specifying the product, and identifying any sales errors or omissions.
- Identifying any additional equipment needed to install the product.
- Determine the design wind load, and specify the product accordingly.
- Determine any applied loads on a bays window assembly. If in doubt then a qualified structural engineer should be consulted.
- Identifying any internal defects, such as cracked plaster, ripped wall coverings, cracked tiles or bathroom components, and bringing it to the customers attention.

It is the surveyors responsibility to ensure that the products specified, meets with all the relevant building regulations, industry standards, or code of practices.

Survey restrictions

The replacement window shall provide an opening equal to 1/20th or 5% of the floor area.

The replacement window shall conform to current building regulations.

Any requirements to clean the window from the inside should be checked.

The presence of any electrical or specialist items such or television aerials and telephone wires in the aperture should be noted. Where possible these should be routed around.

Any curtain poles,net curtains or blinds, should be noted. The customer should be made aware about the dangers of fixing anything to the PVC-U sash window. Any hole drilled can not be filled and painted easily as with a timber window. Also anything being fixed to the jambs of the frame may interfere with the correct operations of the balances.

The existence of any restrictions limiting the installation of PVC-U windows should be checked with the local authorities, especially for listed buildings, or properties which are in a conservation area.

Survey Notes

Surveyors Checklist.

Aperture:

•Aperture and DPC is in suitable condition for the installation?

•Is there any evidence of damp of any existing cracks?

•Are the windows Load Bearing?

•Any services in the aperture or in the existing Sash Window?

•Will the existing curtains be a problem?

Measurements:

•Are the aperture diagonals within 10mm?

•Do the three width measurements agree within 5mm, if not what proposed actions?

•Do the three height measurements agree within 5mm, if not what proposed actions?

•Does the window require a sub-cill, if so what size?

Regulations:

•Is there adequate fire escape?

•Is the building listed, or in a conservation area?

•Has safety limit stops been considered?

•Does the window require ventilation?

Function:

•Will the proposed style of window function in the reveal?

•Is the window within the company size limits?

•Will any Georgian bars line through from other windows?

•Is any safety glass required?

•Is the window specified suitable for the exposure of the property?

•Are the extras specified on the order correct?

Bays Windows:

Is there any cracks or evidence of existing settlement?

Is the head in good condition, and will it be left in place?

Will structural bay poles be used?

What if any or the existing trim will be re-used?

Fixing Method:

How will the windows be fixed?

How will the head be fixed?

What addition materials will be needed?

Pre Installation Checks

It is good practice to inspect the windows prior to installation to cover the following subjects, ideally this should have been done shortly after receipt of delivery, however it would not go a miss to satisfy yourself that the products are fit for purpose before doing anything else on site.

Permissions

Does the company have the relevant permission to change the windows in the property. Make sure that installation has W.I.S.A or local building control approval. If the property is located in a conservation area does it have the correct planning approval and or conservation area consent.

Building Regulations

Do the windows comply with the current building regulations. The surveyor should have correctly specified the windows, but it is wise to check before removing the existing window. As of the implementation of the revised approved document L, all replacement window will come under control of the building regulations, and as such any installer may have the pleasure of a visit from either a W.I.S.A or local building control inspector.

Quantity & Quality

Before commencing on site check to make sure that you have the correct number of windows and that they are of suitable quality for use. Windows should be suitably protected in transit as to not cause any damage.

Sizes

Check that the sizes of the windows ordered will fit into the structural opening. A check against survey will not identify any possible surveyor error, after all remember everyone is human. Mistakes found after the existing window has been removed will only cause embarrassment, inconvenience to both the company and client, and could result in the client withholding money at the end of the installation as compensation.

Customers Property

Defects.

It should be identified on the survey any existing damage to the customers property, albeit the superstructure, internal plaster or tiles. However before the existing window is removed check again for any signs of existing damage. Any damage found should be recorded onto the survey and the customer notified before any work is carried out on that particular window installation. The customer should sign to agree any existing damage found.

Aerials.

The presence of a co-axial cable running through an existing timber window is not uncommon. However this again should have been identified at the time of survey. The customer should have been instructed that this would need to be re-routed as not to obstruct the window installation. Should a cable be still present, then the customer should be made aware that the installation of that particular window will be delayed.

Property Protection.

At all times care and attention to protecting the customers property and belongings should be taken. Ask the customer to remove anything obstructing clear access to any windows. It should not be the responsibility of the installer to do this. The installer should also have adequate clean dust sheets for the inside, not only for the immediate vicinity of the opening, but for the route through the customers property.Always keep plenty of dust sheets and tarpaulins as the installation will only be as good as the fitters.

Installers can make or Break a job, Keep it Clean & Tidy

Window Removal

Heath & Safety.

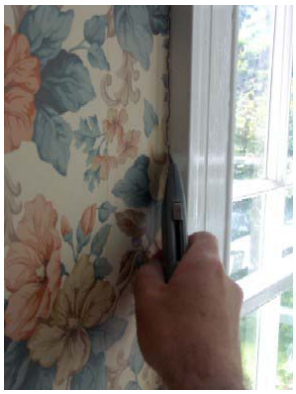
At all times the installation should be carried out in a safe manner, to the installers, home owners, and passing pedestrians, pets or traffic. The list of risks present during an installation is lengthy, but common sense will overcome most situations. Properties that front directly onto a pavement should be coned off, and identified that men could be working overhead. Care must also be kept in mind when clearing up at the end of a day or installation, debris left in long grass, al1beit shards of glass of nails etc, can be a danger at a later date to children playing or the homeowner cutting their grass.

Window Disposal

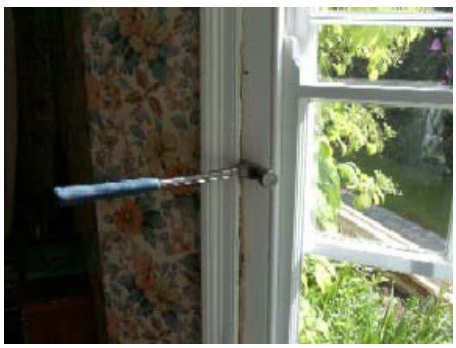
It is normally the responsibility of the installer to remove the old windows from site, and to dispose of them. If the installation is large enough that a skip is required then this must be situated, to be as un-obstructive as possible. Any skip which is being stood on a public road, will need permission from the local council and must be illuminated at night.

Removal procedure

The following is a step by step procedure for removing the old timber window. As all installations are different, it may be needed to adjust the sequence to accordingly.



To reduce the damage to wall coverings, cut through any paint or wallpaper adjacent to the architraves with a sharp knife.



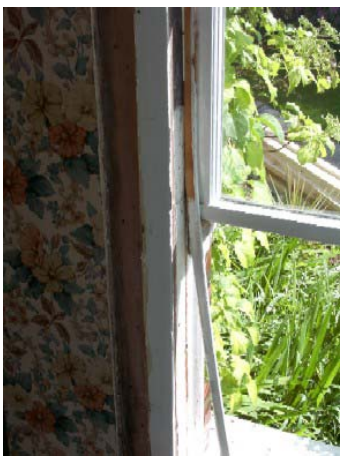
Gently Pry off the architraves from the timber box section. If these are to be re-used then store them somewhere safe.

Gently remove the window boards from the box section. Small stub cill as shown will generally be nailed horizontally through, where as with a deeper reveal the chances are that they are fixed vertically.

Window Removal

Cut the sash cords to the bottom sash, pry off the internal staff bead trims, and remove the glazed sash from the window.

Cut the sash cords to the top sash, pry out the parting bead from the frame, this will probably be a push in fit.Remove the top sash from the window.



Remove the internal box section as drawn. This will allow for the weights to be removed. Once these actions have been done it will be possible to see where the lintel is and where to cut through the frame in order to remove it from the aperture.

Once all the frame has been removed from the aperture, clean up any residue of cement which was externally sealing the frame to the structure.

Window Fixing

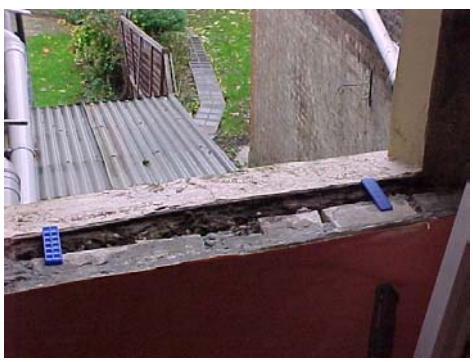
General.

It is vital that the sash window is fitted plumb and square. If the window is not square then the sashes will not slide or meet correctly. Unlike a casement window it is also critical that the jambs of the frame are not bowed inwards as this will make the window impossible to slide and tilt, likewise bowing a frame outwards will make the window draughty.

The most important tool the installer needs to take to site is a spirit level.

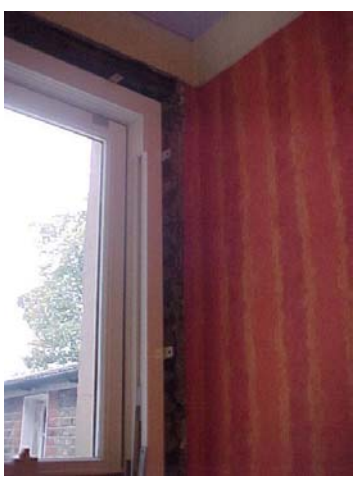
Cill Packing.

It is important to pack under the two corners cill of the window directly beneath the jamb, to allow the dead load to be transferred directly to the structure without bowing the cill. Failure to pack under the jamb properly could result in the cill bowing upwards and the cams not engaging.

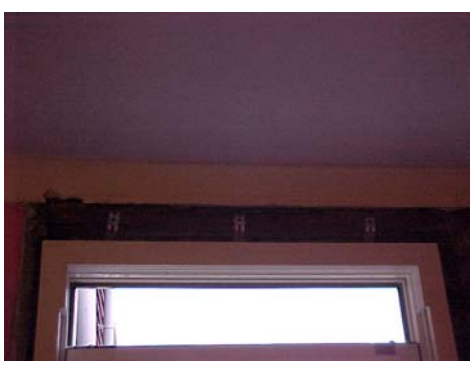


Fixing Lugs & Centres.

Reading GGF guidelines on this subject will say 150mm for the welded corners and maximum 600mm centres. This is a very black an white statement, in reality it depends on the condition of the structure. Sure keep as close to the corners as possible and try not to distance the lugs too far apart, but beware of the condition of the bricks, 600mm might fall on a damaged brick, where the brick above or below might be more suitable for the fixing.



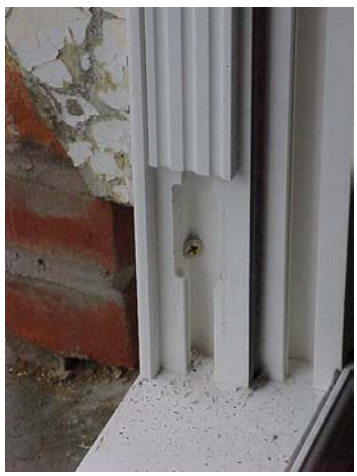
Pictured are three fixing into the lintel of the property by the means of lugs. Although lugs are the preferred method of fixing, it is possible to remove the cover profile from the head of the window and direct fix through.



Window Fixing

Direct Fixing.

As mentioned on the previous page this is possible. At the bottom of the window lift up the travel stops and fix out of sight below, never remove these stops completely as failure to put these back will result in the balances being overstretched and broken. This will not be covered by any warranty. Great care should be taken when fixing windows in this method, as it is very easy to bow the frame, thus making it draughty. Should anything like a screw head be sticking proud of the PVC-U where the pivot shoe needs to travel then obviously it will interfere with the smooth running of the window.



Fixings should never be screwed vertically downwards through the cill.

Expansion Foam.

We recommend that installers are very careful with using expansion foam as a fixing aid. Around the corners of the window is fine, but too much up the jamb of the window could cause the frame to bow inwards and make the window tight to slide and almost impossible to tilt. Brace across the centre of the frame before any foam is used Using 3mm glass packers between the sashes and the frame, as illustrated will identify if the correct working tolerances are present or if the foam has bowed the frame

Insulation.

There is an conflict of opinion as the whether or not to fill the void between the window and the structure, where the old timber box was situated. Some people think that it is an aid to moisture breaching across the new frame to the inside plaster work should the exterior seal fail. We believe the void should be filled as a further means to insulate the installation, and reduce the potential heat loss in this area.

Making Good

General.

Before making good by which ever method is chosen some basic practises must be followed.

Protective Tape.

The protective tape must obviously be removed. Leaving the tape on the profile in direct sunlight can lead to the tape almost welding itself to the PVC-U. Should you ever find that this is the case, a household hair dryer, not a hot air gun, will aid in the removal, but be warned it is a very slow and painful procedure.

Condition of the structure.

Attention should be taken to the condition of the structure that any sealant is supposed to bond to. Flaking external paintwork should be pointed out to the customer, and a wire brush should be used to remove any flaky paintwork prior to the seal being applied.

Type of Sealant.

There are two main type of sealants used within the industry, Silicone or Acrylic. As silicone can not be painted over, then obviously it is not suitable for internal application and acrylic should be used in its placed. However depending on the type of acrylic sealant it may not be suitable for exterior use, if the window is adjacent to painted render then an exterior acrylic should be the preferred method. Only when sealing to brickwork would we recommend using a silicone sealant, and even then this seal should be covered with a trim.

Cement Fillet Joint.

As PVC-U windows expand and contract with the change to temperature, as much as 1mm / Metre / 10° C change in ambient temperature. We would not recommend using a cement joint between the PVC-U frame and the structure as means of sealing the window. I appreciate that this method may look more traditional, but unfortunately is not practical. Neither the Glass and Glazing Federation's guidelines for replacing windows, or the British Plastics Federation code of practice for installation of windows, endorse cement fillets as a suitable method of making good. They are in favour of a more practical flexible sealant.

Making Good

Internal

The method of making good the internal of the window is very much up to the clients wishes. Illustrated in photo 1 are timber architraves however PVC-U could be used or the Halo internal fluted internal trims and Keystones, as pictured in photo 2, refer to the technical manual for fixing instruction. It may be the wishes of some customers that their original architrave be put back up.

No matter which method is used it is wise to make an acrylic seal between the architrave of trim and the structure.

Photo 1

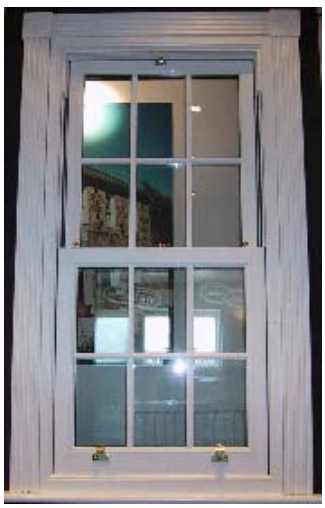
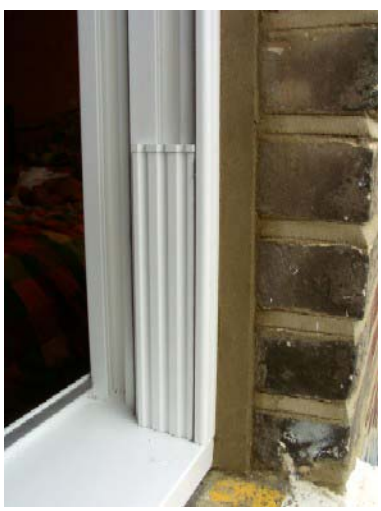


Photo 2

External

Picture is the most traditional method of making good the exterior, as previously described. Our recommendations would be for a silicone seal and then a trim over the top.



Product Testing & Signing Off

Operational Checks.

It is important that at the end of the installation the windows are thoroughly checked and tested .

If the window has been fitted without suitable packing under the jambs of the windows then it is possible that the cill will been bowed upwards. The knock on effect of this is that the cams may be tight to engage when the window is closed, or worst still miss altogether.

If the jambs of the window bow outwards then the window will be draughty, and likewise if the jambs bow inwards then the sashes will be tight to slide, and impossible to tilt inwards for cleaning. A 3mm constant gap must be present between the sashes and the frame.

Check that the cams engage properly. They cam should push the top sash tight to the top of the frame and the bottom sash tight to the cill, the rider block will stop the sashes being pushed too tight to the frames that it is detrimental to the seal. The cams and keep should also pull the two sashes closer together at the meeting rail.

Handles.

Once the windows have been fitted correctly and you as the installer are happy with the operations of the window, then it is time to fit the handles. Supplied with the windows will have been two packs per window. In one pack will be the tilt release knobs, whilst in the other will be the handles and relevant screws to fit them. On the reverse of this handle packs are complete instructions of how to fit the handles.

Signing Off.

Once all the windows are installed, made good, cleaned down, all protective tape removed, and operational checks have been done, the only thing left to do is to demonstrate the operations of the window to the client. Make sure the client knows how to correctly tilt the sashes in for cleaning, and is happy with the operations of the window and the installation. Have the client sign all the windows on the survey sheet as an indication that they are happy with the installation. If this is done then they should not have any reason to hold up any payment due.

Leave the customer a copy of the ‘Customer Care’ leaflet as they will need this for preventative maintenance and to validate any warranty given.