

## General information

Good surveying is the basis of ensuring a quality installation. Follow these points:

- Is the chosen window suitable for the opening, window swing etc.
- Is the surrounding masonry and structure in good order, if not investigate and rectify the defect before proceeding.
- Which method of fixing will be suitable for the opening.

## Measurement

### General information

If the preliminary survey is satisfactory proceed to the measuring of the opening.

### Width

Measurements of the width of the structural opening at the top, middle and bottom of the window are taken. The smallest of these measurements are taken as the window width.

### Height

Similarly three measurements are taken at both ends and the middle of the opening. Again the smallest is used as the window height.

It is good practice to deduct 10 to 12 mm from the minimum size of both width and height when measuring. This ensures a sufficient gap between frame and opening for installation.

In some occasions, usually due to subsidence. The opening can skew. It is good practice when measuring to measure both diagonals. Ensure that both measurements are equal to within 10 mm of each other. If not please seek guidance.

**Note:** When building work is being undertaken to house the window, do not build around the window in situ. But wait until the last possible moment before installing.

## Installations

Windows shall be installed plumb and square without twist, racking or distortion of the window to within stated tolerance to ensure correct operation after installation.

uPVC window frames are manufactured accurately to specified outer frame dimensions and have specific opening light to fixed frame cleaners for operational efficiency. Distortion of any frame or sash member will reduce the performance, impair the operation and create a security risk.

## Window positioning

Positioning of your windows is done on the back of your judgment. These factors must be taken into account when positioning:

- Bridge the cavity.
- Cover the Damp Proof Course (D.P.C.).
- Set back as far as possible

When a thinner window frame replaces the original thicker one, it is customary to fit back to the existing plaster and make good externally. In cases where the new frame is much thicker, i.e. replacing steel frames, it may be necessary to remove plaster to ensure that the outside face of the new frame is fitted inwards of the building line.

## Fixings

All metal fixings such as lugs, screws and bolts should be of materials and finishes intended to offer the best corrosion resistance for the situation. They should therefore be made from one of the following:

- Stainless steel grade A2, A4 or F1 complying with BS 6105.
- Steel which has been finished by one of the following methods:
- Zinc plating in accordance with classifications No. Zn3 of BS 1706 and chromate passivation in accordance with class 2C or 2D of BS 6338.
- Hot dip galvanising in accordance with BS 729 to a minimum coating mass of 460g/m<sup>2</sup>
- Spraying with a zinc coating in accordance with symbol Zn4 of BS 2569:

## Part 1

- Sheradizing in accordance with class 2 of BS 4921
- Aluminium alloy 6063 TF, 6063 TE or 6063 TB complying with BS 1474 anodized to grade aa15 of BS 1615 Where it is necessary to blend fixing lugs to suit the perimeter gap, this should be done before the lugs are fitted to the frame, otherwise the bending operation may distort or damage the frame.

## **Preferred methods of fixing**

Fixing methods should take into account thermal movement and will be influenced by:

- Presence or absence of wall cavity
- Type of cavity - open or closed
- Relative position of the frame with regard to the cavity
- Plaster line and any requirement to preserve interior decoration
- The design of the reveal

There are two principle methods of fixing available, which may be used either separately or in combination they are:

- Through frame fixing
- Lug fixing

Foam fixing offers a useful supplementary method of fixing where through frame or lug fixing prove impractical (for example at aperture heads). The technique requires skilled application to avoid problems of the frame distorting. Be sure to read and follow the manufactures instruction on using the foam.

## **Preferred fixing distances**

The distance between adjacent fixings is chosen after careful consideration of all relevant factors. These are:

- Position of transoms and mullions
- Position of hardware
- Nature of the adjacent structural materials

In general, all four sides of the frame should be secured using the following guidelines to determine fixing spacing:

- The corner fixings shall be a minimum of 150mm and a maximum of 250mm from the corner
- No fixing shall be closer than 150mm to a transom or mullion centre line
- Intermediate fixings shall be at centres no greater than 600mm

Finishing off Every care should be taken during installation to ensure that debris such as wet plaster, etc., does not foul drainage holes or impair the operation of the hardware. Internal reveals should be made good, ready for redecoration. When making good internally, the materials used should not be applied on top of existing wall covering materials, as the former would be removed during redecoration. Neither sand and cement or plaster should be used to fill the gap between the back of the frame and the structural opening. When it is necessary to seal internally, such sealants should be capable of accepting paint or wallpaper.

## **Glazing**

### **General**

All glazing must comply with requirements of BS 6262, in addition recommendation from glass and glass unit manufacturers should be followed. All glass and insulated units should be examined carefully for damage, especially at the edges, prior to installation. Defective Items should not be used. The size of the glass used for glazing must be such that both the necessary clearance between the edge of the glass and the base of the rebate, and also the necessary sealing joint gaps are present.

### **Recommendations for Glazing Procedure**

The system designers recommendations should be followed. Glazing gaskets, especially pressure wedges are prone to creep back which can result in unacceptable gaps at critical junctions. This can turn significantly and impair the performance of a window. All possible precautions must be taken and it is suggested that the following guidelines be considered:

- All gaskets should, where possible, go around a window in one piece. The joint will be in the least exposed area of the window (in most cases this will be in top centre) and all seal junctions will be offset.
- Pressure seals are the most sensitive gaskets to creep back. If they are not designed to prevent over-stretching, the following procedure should be adopted in addition to the guidelines stated in the above paragraph.
- It is advisable that gaskets should be cut oversized, so they are not extended under tension when assembled. The excess material will provide loops along the edges of the window which will be pushed into position only after the seal joint faces and corners are secure.
- If it is not possible to fit the pressure gasket as a continuous piece, each section must be over cut and installed as already stated in the above paragraph.

## Glazing blocks

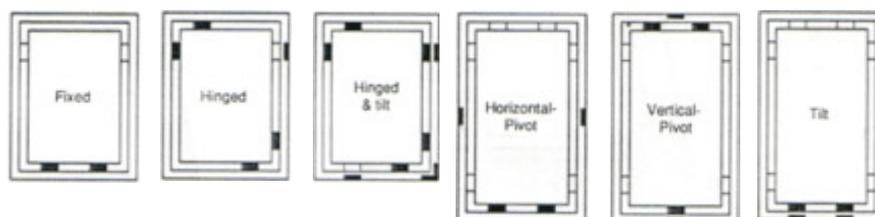
The use of glazing blocks is essential to allow the windows to function correctly. The manufacturer's recommendation or block sizes, material and locations should be followed exactly. These are particularly important for side hung and tilt and turn windows.

## Securing the glass

The glass or glazing is usually secured in place with glazing beads incorporating glazing gasket. In certain circumstances it may be advisable to use sealing tapes or resilient sealants to secure the glass or glazing units, or to supplement the use of glazing beads. When these methods are used, the recommendation of the sealing tape or sealant manufacturers must be followed with regard to their use.

## Drainage

It is essential that the systems suppliers recommendations for securing the glass in place are followed. Specifically, care must be taken to ensure that glazing blocks or spacers do not obstruct drainage of the water from the glazing rebate.



## Final Checks

The purpose of the final checks is to ensure that the installation is of a high standard. It is advisable that, in the absence of any formal handover procedure, these checks are carried out in the presence of the customer. They should be just that (Final Checks)

- All glazing beads and gaskets or glazing sealant are adequately fitted.
- Opening lights function correctly and are fitted square within the frame.
- All locking points engage in their respective keeps.
- No gaps exist between frames and weather-strips.
- All swarf and debris has been removed from channels and drainage paths.
- There is no movement in the outer frame.
- There are no cracks or breaks in any frame member.

## **Cleaning & Maintenance**

### **General**

In general the maintenance of uPVC windows requires only that they are washed, and that the systems suppliers' instructions should be followed if any periodic lubrication of mechanism is required. uPVC is particularly resistant to both marine and industrially polluted environments. Certain solvents, e.g.. Ketones and chlorinated hydrocarbons will affect the surface of the uPVC. Rust stains cannot be removed by normal methods.

### **Cleaning**

uPVC windows should be cleaned at periodic intervals to maintain their original appearance. The frequency depends upon the ambient atmosphere but as a general rule the frames should be cleaned whenever the glass is cleaned.

The best method of cleaning is to use a clean cloth and a solution of detergent, diluted to the normal concentration for washing-up. It is important to 'flood' the uPVC frame, and at no time rub the dirt with a dry or semi-dry cloth, as this might lead to micro-scratching of the surface.

Internal surfaces may be polished with a colourless silicone furniture polish after washing if required.

### **Special circumstances**

If a surface has been allowed to become excessively dirty, it should be cleaned as recommended above. If any unsightly stains remain, they should be removed using a mild household non-scouring cream, followed by washing.

Abrasive materials should not be used for any cleaning purposes as these can cause micro-scratching of the surface. Especially avoid the use of steel wool pads, as they might cause permanent stains.