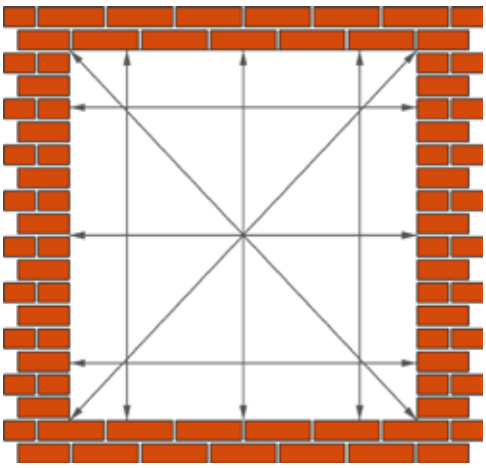
SURVEY AND INSTALLATION

1. Survey

- Check for any apparent defects and deficiencies around the structural opening. Openings should be measured in line with the illustration shown in ***fig.1***
- The smallest width and height dimensions taken become the 'tight' sizes to be adopted
- A check across the diagonals is also made to confirm the square shape of the opening
- The preferred method of fixing is determined during the survey, usually in discussion with the client, along with any other issues affecting installation
- Ensure installation can satisfy local Building Regulations for fire safety

fig.1 Measurement of openings



During the survey stage, it is the responsibility of the installer to take into account the implications of all statutory regulations and health and safety issues.

2. Fitting Tolerances

- Fitting tolerances, or clearances, are made from the 'tight' sizes identified during survey. These tolerances are essential to permit expansion and contraction of the PVC-U frame
- The table shown in ***fig.2*** should be used to determine the appropriate tolerance
- Wider tolerances are necessary for larger frames and those made from non-white profile, particularly darker colours
- Once the tolerance is deducted and allowances made for such things as stub-cills or frame add-ons, the remaining sizes are the frame 'manufacturing' sizes

fig.2 Normal fitting tolerance

	Frame size		
Profile Type	≤ 3.0m	≥ 3.0m ≤ 4.5m	≥ 4.5m
White	5.0mm	7.5mm	10.0mm
Non-white	7.5mm	11.0mm	14.0mm

The tolerances shown are per side of frame. Allowances should be also made for the thickness of any sealant or mortar bed at the cill.
Frames over 3.0m should be constructed using a coupling profile with provision for expansion.

3. Frame Positioning

- Care should be taken to ensure that new frames are correctly positioned in the opening, with all horizontal members level and vertical members plumb
- Temporary packers/wedges should be used to position and steady the framing prior to fixing

4. Fixing Methods

A number of industry-approved methods can be adopted. Fasteners and lugs supplied should be suitably protected against corrosion in accordance with industry standards.

a - through frame fixing
Fixings should be sized to securely penetrate at least 40mm for windows and 50mm for doors into brick, block, concrete or masonry, or 25mm into timber framing. Fixing into steelwork up to 2mm thick such as folded sheet lintels should be made with appropriate self drilling screws. Connections to steelwork over 2mm thick should be into pre-tapped holes using machine screws of minimum 5mm Ø or alternatively with power-driven hardened self drilling screws.

b - with fixing lugs
Alternative means of mechanical fixing to (a) above, most commonly used on new build applications to enable factory glazed frames to be used. The requirements for anchor penetration, use of frame packers and quantity of fixing points is as per (a).

c - with polyurethane foam
The presence of precast concrete or steel lintels can make it difficult to achieve through-frame fixings or fixing lugs. In such instances polyurethane (PU) foam may be used as a supplement to mechanical fixings but should not under any circumstances be used as the sole method of securing the entire frame into the reveal.

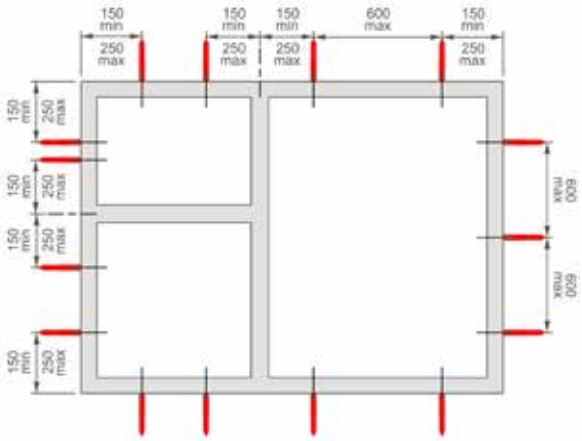
d - other
Other fixing methods should be carefully assessed for suitability and supported by appropriate professional third party advice.

5. Fixing Locations

Mechanical frame fixings should be positioned in accordance with the details shown in ***fig.3***

- Not less than 150mm and no greater than 250mm from corner joints and transom/mullion centre lines
- Intermediate fixings at maximum 600mm centres
- A minimum of two mechanical fixings per jamb should be provided
- Coupled frames should be carefully aligned during fixing and secured at the prescribed distance from the corner. When couplers are used as an expansion joint they should be sealed with a wet sealant, impregnated foam tape or flexible polymer gasket, they must be positioned within the joint during the assembly operation
- Fixings through the cill area should be sealed to protect against the ingress of water

fig.3 Fixing centres



6. Glazing

- Glazing should conform to the recommendations given in the relevant part of BS 6262, BS 8000-7 and satisfy local building regulation requirements.
- All IGU's should conform with the requirements of BS EN 1279–5.
- IGU's incorporating safety glass should be oriented with the safety glass on the appropriate side. It is a legal requirement that the marking on the safety glass remains visible after installation.
- IGU's with low emissivity coatings should be oriented in accordance with the manufacturer's instructions.
- IGU's and/or panels should be installed in accordance with Deceuninck guidelines. Care should be taken when installing glazing bridge/packers to ensure glass load is correctly transferred to the frame.

7. Sealing of Frames

- The fitting tolerance between the frame and structure should be sealed against the ingress of water and to prevent air leakage
- Use a sealant appropriate for the application. Low modulus silicone sealants are commonly used with PVC-U framing as they permit differential movement without loss of performance
- Frame to structure gaps in excess of 6mm should have a firm closed cell backing strip supplied to avoid the use of excessive sealant and possible 'sinking' during the curing phase
- Impregnated foam tapes can also be used for sealing, they should remain permanently flexible and accommodate joint movement of at least the same as a wet sealant. The use of impregnated foam tapes may enhance the thermal performance of the installation due to the location within the perimeter joint; these products must normally be applied prior to the frame being installed

8. Bay Window

- It's important to determine from the survey if the bay is load bearing or not, where any doubt exists, suitable professional advice should be sought (e.g. structural engineer)
- Where significant loads are being transferred the bay poles must penetrate through the cill to a bearing plate.
- Acrow props should be employed during removal and replacement of bay windows
- Bay posts/poles should always be reinforced regardless of any load requirement. Connecting frames should also be reinforced
- Frame fixing centres into the bay post/pole and the structure should follow rules for flat windows and doors.

9. Finishing and Cleaning

- The making good of reveals should be undertaken to the level agreed at the outset of the contract
- Frames should be wiped down using non-abrasive materials. Any cleaning agent used for more stubborn marks should be rinsed thoroughly
- Drainage paths must be cleared of debris
- Protective tape on the framing should be removed as soon as possible, old tape can be difficult to remove
- The colour of any finishing trims used should be the same as the Deceuninck profile

10. Final Inspection

- Following completion the installation should receive a final inspection to check product function, compression of weather seals and visual appearance
- The operation of some product types may need demonstrating to the client
- Conduct the final inspection in the company of the client