INSTALLATION

Correct installation is very important for the operation and life span of the window and should be carried out by a skilled operative who is trained in the installation of external windows and doors (preferably composite Scandinavian products).

The following instructions are designed to aid the installer with all aspects of fixing Westcoast Windows products. Please ensure that you use these instructions together with any bespoke fixing details that may have been provided by your dealer or project architect.

If you have any special fixing requirements not covered in these instructions then please contact your Westcoast dealer or the UK technical office (see contact details on front cover).
The drawings below show some of the technical terms that are used in the installation section of the handbook.

OUTSIDE
1. Timber rebated edge
2. Perimeter tolerance gap (filled by external Perimeter Seal)
3. Glass unit (double or triple glazed)
4. Opening sash (Head rail, Bottom rail and Stiles)
5. Reveal depth (distance face of window is from face of wall)
6. External aluminium cill flashing
7. Espagnolette receiver
8. Hinge assembly

INSIDE
1. Timber frame head
2. Trickle ventilator
3. Window handle
4. Timber frame jamb
5. Timber frame cill (aka threshold for doors)
First measure the aperture to check that the window will fit. Basically the window needs to be smaller than the opening by 5-10mm around the perimeter of the frame to allow for a suitable seal and to reduce frame distortion.

It is not advisable to install a window into an incomplete opening, so clear the opening of all debris and check that the wall aperture is sound and robust.

Make sure the threshold or sill of the opening is level and can support the weight of the window unit. The job of the aperture is to withstand the forces transmitted from the dead load of the window and from any wind or barrier loads without deformation.

Give thought to how you will lift the product into the opening and how you will hold it in position while it is being fixed. Products are very heavy and will need to be securely held. Westcoast Windows always advise installation of any product by a minimum of two able persons.

In the UK, all windows and doors should be installed in accordance with BS8213. It might be useful to read this document if you are new to window installation. You might also want to check that the installation adheres to current UK building regulations.

Westcoast Windows do not recommend building in products or using pinch battens. This may affect the guarantee.

Make sure enough height is provided at the head of the window internally for the trickle vent. Any reveal linings such as plaster board should not impinge on the vent operation.

When installing inward opening doors please allow adequate room on the hinge side so the door can open fully to 90 degrees without clashing with skirting board.

Also allow enough space between the underside of the door leaf and the floor finish for the door’s entire swing.

Do you have the correct tools to do the job? See below.

**Tools That You Will Need**

Please make sure that you have the necessary tools available before you start installation.

Westcoast suggest the following tools and equipment as a minimum.

- Spirit level (the longer the better).
- Powered drill with a selection of drill bits for timber, metal and masonry substrates.
- 14mm spade bit – if nylon caps are to be used.
- A range of screwdrivers unless the drill has this facility.
- Tape measure – calibrated.
- Lifting bar – suitable for levering heavy windows and doors and to help with levelling and packing.
- Silicone gun – if using silicone as an external seal.
- Fixing straps – pre-formed galvanised metal straps/brackets of the correct length. Enough to meet the minimum fixing points. (see page 17)
- Cover caps/bungs – to hide screw heads if direct fixing.
- G-clamp – for help in coupling frames together.

**Things To Consider Before We Start**

**Tools That You Will Need**

```
SPIRIT LEVEL
ELECTRIC DRILL
14MM SPADE BIT
SILICONE GUN
TAP MEASURE
SCREWDIVETERS
PACKERS
LIFTING BAR
FAST ACTION OR G-CLAMP
```

Rubber/wooden mallet
**CHOOSING A FIXING METHOD**

It is advisable to think about this issue prior to fitting the frame. Consider the make-up of the wall in which the product will be installed.

- What is the overall depth of the wall?
- Does the window bridge the cavity?
- What is the set-back (or reveal depth) of your window from the front face of the wall?
- Is there a proprietary cill already installed onto which the window must sit in a specific way?

All these questions will determine how you install the product. Direct or in-direct fixing.

Your dealer or project architect should be able to advise you of the best method of fixing depending on the construction of the openings. You may need to use a combination of both methods as your project may have a mixture of wall constructions. For further information see typical fixing details on page 41.

**Direct Fixing** – can be used when the frame is in line with a suitable load bearing wall member. A metal fastener is direct fixed through the timber frame into the structure. For fixed light windows the arrangement is slightly different – please see typical fixing details for further information. Note cover caps are used to hide all direct fixings.

**In-Direct Fixing** – a ‘strap’ is fixed to the outer edge of the frame and then taken back to a suitable load bearing internal wall member. ‘Brackets’, ‘lugs’ or ‘straps’ are the common terminology used to describe the mild or stainless steel bar that is used to restrain the window back to the structure. These bars are usually cranked to take up the tolerance gap between frame and structure and are of varying lengths according to the wall depth and window set-back. All fixings are hidden.

**WARNING!** ALWAYS PROVIDE STRUCTURAL SUPPORT TO AT LEAST 50% OF THE WINDOW FRAME AT CILL, JAMB & HEAD (FOR THE STANDARD FRAME = 50MM)

**CHOOSING SEALING METHOD**

Also consider how you are going to seal the window into the aperture. If using a traditional silicone mastic then this can be done after the window is installed. However, if an impregnated seal (‘Compriband’) or an EPDM/intelligent membrane is to be used then these items may need to be attached to window frame prior to installation in the opening. See information on sealing types and materials (page 31).

Once you have decided on the method of fixing and sealing then you can move onto setting the frames.
SETTING THE FRAME AND FIXING – OVERVIEW

The basic aim is to position the frame level and have a uniform tolerance gap around the perimeter (Westcoast recommend a minimum 10mm gap around the perimeter of the frame). It is imperative that the window or door is level and plumb in the aperture. Failure to manage this means the product’s operation may be compromised.

Support packers or blocks will be used to set the frame level and plumb (nylon packers are recommended as they are made of a dry, rigid and rot-proof material and come in a variety of size and thickness – see page 39 for recommended fixing materials). Packers must be of a suitable size and shape to effectively transfer the fixing load into the main structure without distortion of the frame.

The basic installation of all products can follow these 4 simple steps.

STEP 1

You should now have the window/door you want to install next to or close as possible to its opening. Place the window or door unit on something soft in order to protect the frame and do the same if leaning the product up against a wall. Some packing material like cardboard will be sufficient.

First check the opening is reasonably level and remove all loose debris. Position packers on to the base of the opening and up against the corners. You will sit the frame upon these packers so remember to place them in accordance with your desired setback.

Use your spirit level to get these packers exactly horizontally level.

**WARNING!** IF USING THE IN-DIRECT FIXING METHOD THEN BRACKETS WOULD NEED TO BE ATTACHED TO THE FRAME PRIOR TO INSERTION.

STEP 2

Place the window into the aperture and onto the packers. Adjust packers until the window is level (a lifting bar will be helpful especially if the window is heavy).

Wedge packers at all four corners of the frame. These packers will need to be tightly fitted.

Make sure that the distance between frame and wall is the same for both sides to ensure the frame is centralised in the aperture.

Check the frame is square by measuring the diagonal distance between opposing corners. Dist1 should equal Dist2. (Tolerance + or - 1-2mm).

Adjust the corner packers until the frame is square.

Use a spirit level to check the frame neither slopes inwards or outwards. Adjust frame until it is vertically level

Don’t start any fixing until the frame is square and level horizontally and vertically. Repeat steps again if necessary.

**WARNING!** MAKE SURE THE WINDOW CANNOT FALL OUT OF THE OPENING. SECURE WITH A TEMPORARY FIXING OR HAVE ANOTHER PERSON HOLD THE WINDOW IN PLACE.
**STEP 3**

Once you are satisfied with the position of the frame you can start fixing your window. Packers must be placed alongside your proposed fixing locations. Remember all fixing points must be packed.

It is important that these packers must be just ‘finger’ tight, not loose but they must be able to be moved in and out by finger. Do not force these packers as they will bow the frame.

The number of fixing points is dependent on the size of the frame, its substrate wall type and any special loadings that may be apparent. See page 17 for recommended fixing centres and suggested mechanical fasteners.

**Westcoast Windows recommend**

minimum fixing locations of 150mm from frame corners and at no more than 600mm centres along the jambs, head and cill.

---

**STEP 4**

Once you are satisfied with the basic configuration of the fixing locations then you can begin the process of fixing the frame. Either with through frame screws or with straps that you have already attached.

Open sash and pre-drill pilot holes in the frame for your chosen fastener (Direct fix). For more details see page 18.

Fix straps back to substructure using suitable fastener for substrate. Place shims between strap and substructure rather than bend the strap (In-direct fix).

Repeat levels check. Check the operation of the sash or leaf and that it doesn’t bind anywhere along its full travel. Check frame is not bowed.

**NB.** You must also pay attention to some special fixing and packing points for some products. Details of these can be found overleaf, i.e. hinge locations, locking points and threshold support etc.
PACKING – IN MORE DETAIL

Find below some special packing arrangements. Packing all four corners of each frame and beside all fixing points is mandatory for all products. However, other packing locations must also be considered so that your window or door maintains functionality and operation.

HINGE LOCATIONS

Packing next to hinges helps prevent any lateral movement in the hinge which therefore prevents the sash or door leaf dropping. This is most apparent in full size glazed doors where the leaf is of considerable weight.

THRESHOLDS

These frame locations where weight is borne by persons standing on them need particular care when packing in order to provide the correct amount of support. Westcoast Windows recommend packing at minimum 250mm centres along the entire length of the threshold.

VERTICAL FRAME MEMBERS

Support packers should always be placed underneath all mullions, meeting stiles and vertical frame couplings.

SUBSTRATE FASTENERS – GUIDANCE ONLY

It is always recommended to seek advice from a qualified structural engineer but here are some suggested fasteners for different substrates. We recommended A2 stainless steel or passivated fixings.

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Direct Fix</th>
<th>In-Direct Fix (bracket)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick/Block</td>
<td>5mm x 90mm (3 ½” x 10 ) with 8mm rawl plug</td>
<td>5mm x 50mm (2’ x 10 ) with 8mm rawl plug - 2 no. fixings</td>
<td>Fix closest to the centre line of brick/block, maximum 10mm packing.</td>
</tr>
<tr>
<td>Timber</td>
<td>5mm x 90mm (3 ½” x 10 )</td>
<td>5mm x 50mm (2’ x 10 ) - 2 no. fixings</td>
<td>Maximum 10mm packing.</td>
</tr>
<tr>
<td>Light Steel (SFS)</td>
<td>5mm x 50mm self drilling screw (TEK)</td>
<td>5mm x 30mm self drilling screw (TEK) – 2 no. fixings</td>
<td>Maximum 10mm packing.</td>
</tr>
</tbody>
</table>

FIXINGS – IN MORE DETAIL

Westcoast Windows recommend fixing centres of 150mm from frame corners and maximum 600mm centres thereafter. This should be sufficient for most standard wind-load conditions in the United Kingdom. Please seek advice from a structural engineer if you feel your project location is subject to high wind exposure or has other specific requirements. If wind-load and the load bearing structure is not known then it is recommended to decrease the fixing centres down to 450mm.
FIXING THE FRAME – IN MORE DETAIL

The following information gives more specific details of typical direct and in-direct fixing methods. The Westcoast Classic outward opening system has been used to produce the following pictures although the principals are the same for inward opening and sliding door frames. Specific details for each type of frame within the Classic, Antik and Design ranges follows this section.

TYPICAL DIRECT FIXING – OPENING SASH WINDOW/DOOR
Open the window sash or door leaf to gain access to the inside of the timber frame rebate.

Mark fixing location along the centreline of the timber rebate. Counter-bore a hole of 14mm diameter and 10mm in depth. Drill a pilot hole in the centre of the counter-bore hole and drill through the frame.

The pilot hole must be a diameter suitable for the substrate fastener. Insert chosen fastener for your substrate (i.e. block, timber, Metsec etc.) through the frame and into the substrate. Tighten fastener with screwdriver or impact driver to desired torque.

Insert nylon cover cap into counter bore hole to hide the fastener. Beige caps complement natural timber finishes.

TYPICAL DIRECT FIXING – FIXED LIGHT WINDOW
Frame is fixed through the back of the timber frame. If hidden fixings are required then the window must be de-glazed. (Seek technical advice).

Mark fixing location along the centreline of the timber frame. Counter-bore a hole of 14mm diameter and 10mm in depth. Drill a pilot hole in the centre of the counter-bore hole and drill through the frame.

Insert fastener/screw and/or plug through frame and into substrate. Tighten with screwdriver or impact driver to desired torque.

Insert nylon cover cap into counter bore hole to hide the fixing. White caps complement a white painted finish.
**FIXING THE FRAME - IN MORE DETAIL**

**TYPICAL IN-DIRECT FIXING - OPENING AND FIXED PRODUCTS**

Straps are attached to the unfinished face of the timber frame. Straps are used if you don’t want to see any visible fixings or the wall construction determines it. Please be aware that straps need to be attached to the window or door prior to setting the frame.

Offer up the cranked strap perpendicular to the outside of the frame. Mark location and drill pilot holes. See recommended fixings (page 40) for the exact strap design, 2 no. fixings into the frame.

Insert and tighten 2 no. wood screws (5 x 30 /No.10 x 1¼). Screws should be positioned a minimum 20mm from edge of timber and offset from each other at a minimum 25mm apart. (This prevents the frame timber from splitting).

Insert and tighten chosen substrate fasteners into pre-drilled holes. Place shims between strap and substrate to take up any gap that still may exist beyond that of the crank. Do not bend strap as this can compromise performance of the fixing and also twist the frame.

---

**FIXING DETAILS BY SYSTEM PROFILE**

Find below typical fixing details for each type of Westcoast product. Further drawing details are available on page 41 – typical fixing details.

**CLASSIC OUTWARD OPENING WINDOW SYSTEM**

(same principal follows for Antik and Design)

See typical fixing drawings (Page 4) for more details
CLASSIC OUTWARD OPENING DOOR SYSTEM
(same principle follows for Antik and Design)

LOW PROFILE THRESHOLD
DIRECT FIX

TIMBER THRESHOLD
IN-DIRECT FIX

FRAME THRESHOLD
DIRECT FIX

FRAME THRESHOLD
IN-DIRECT FIX

CLASSIC INWARD OPENING WINDOW SYSTEM

SASH DIRECT FIX

SASH IN-DIRECT FIX

FIXED LIGHT DIRECT FIX

FIXED LIGHT IN-DIRECT FIX

CLASSIC INWARD OPENING DOOR SYSTEM

SHID FRAME PROFILE
THRESHOLD DIRECT FIX

SHID FRAME THRESHOLD
IN-DIRECT FIX

SHID LOW PROFILE THRESHOLD
DIRECT FIX

SHIDL LOW PROFILE THRESHOLD
DIRECT FIX

CLASSIC SLIDING DOOR SYSTEM
(same principle follows for Design)

SDA/SDC THRESHOLD IN-DIRECT FIX
(only if really required, as self weight of door prevents lateral movement)

TS FRAME THRESHOLD
DIRECT FIX

TS FRAME THRESHOLD
IN-DIRECT FIX