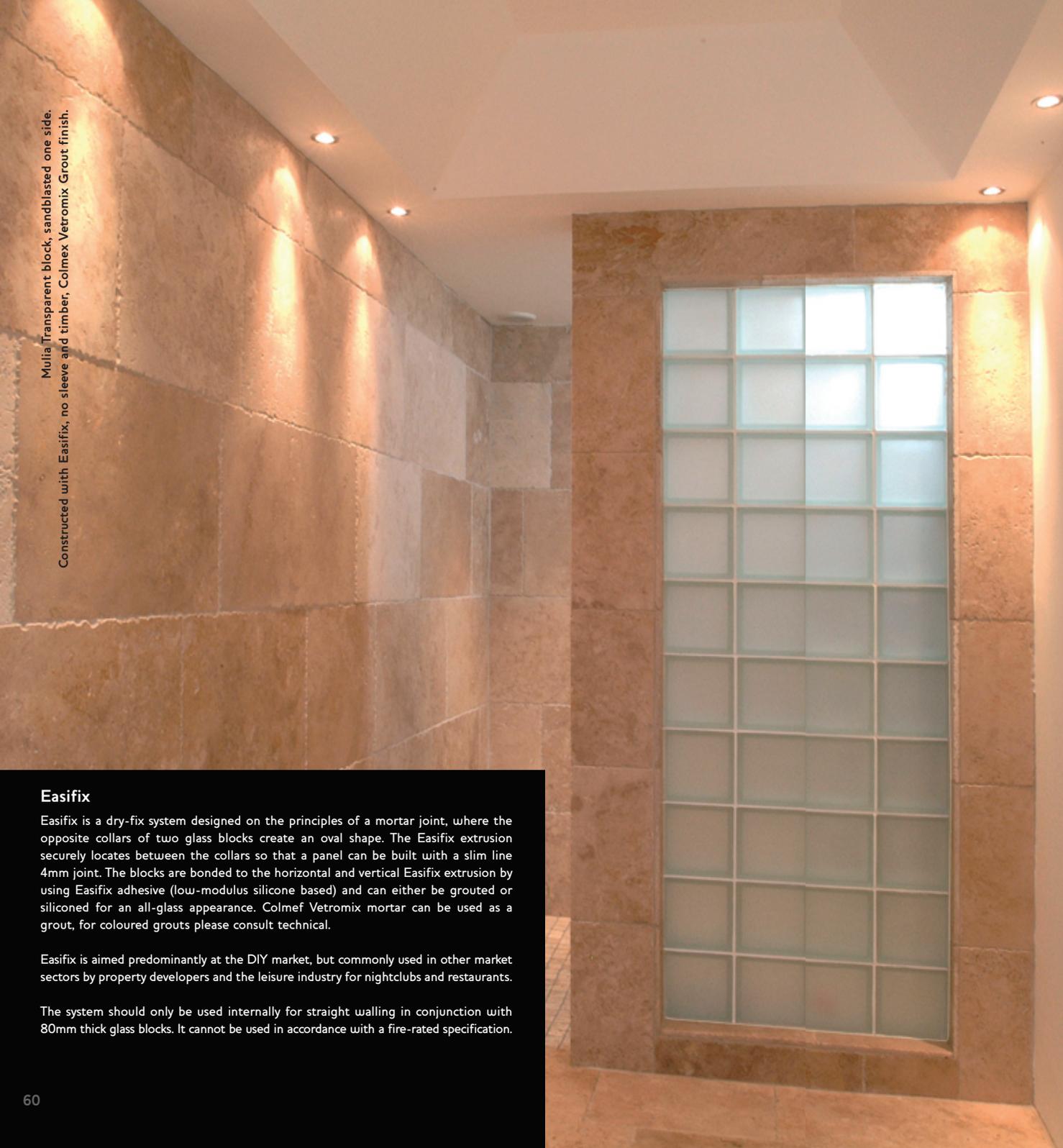


Mulia Transparent block, sandblasted one side.
Constructed with Easifix, no sleeve and timber, Colmex Vetromix Grout finish.



Easifix

Easifix is a dry-fix system designed on the principles of a mortar joint, where the opposite collars of two glass blocks create an oval shape. The Easifix extrusion securely locates between the collars so that a panel can be built with a slim line 4mm joint. The blocks are bonded to the horizontal and vertical Easifix extrusion by using Easifix adhesive (low-modulus silicone based) and can either be grouted or silicined for an all-glass appearance. Colmex Vetromix mortar can be used as a grout, for coloured grouts please consult technical.

Easifix is aimed predominantly at the DIY market, but commonly used in other market sectors by property developers and the leisure industry for nightclubs and restaurants.

The system should only be used internally for straight walling in conjunction with 80mm thick glass blocks. It cannot be used in accordance with a fire-rated specification.

The golden rules of building with Easifix

Glass block walls are self-supporting, but not load bearing so support is required above the head to eliminate downward pressure on the glass blocks.

When constructing Easifix it should be connected to the perimeter opening. For best integral strength, panels should be installed into a four-sided, pre-prepared opening. The aperture can be timber, brick, steel, concrete or blockwork.

Glass blocks expand and contract with temperature change. Therefore they should not be installed when the surrounding temperature is 5°C and falling or 30°C and rising. Easifix is designed to function in harmony with expansion and contraction.

The Easifix extrusion is manufactured from PVC. Easifix adhesive supplied to bond and point glass blocks will expand and contract 50% of its own volume.

The perimeter expansion joint between blocks and Easifix sleeve or perimeter opening should always be caulked with silicone. If this joint is grouted it may be susceptible to cracking because of restrictions in expansion and contraction.

Ensure all sides of perimeter opening are square and perpendicular and made to suit glass block modules. It is crucial that the opening size is properly prepared and is advisable to set the glass blocks and Easifix system out dry before beginning building as blocks cannot be cut like masonry bricks or tiles.





Easifix Sleeve and Timber

Easifix sleeve is a unique extruded PVC U-channel which accommodates a timber liner (71x15mm - supplied). This is used as perimeter framing to house an easifix panel.

Once the panel opening size is determined the timber can be square cut and screwed together. Then the sleeve can be mitred or square cut and positioned over the timber.

The sleeve and timber framing can then be fitted and screwed to the opening.

Anchor brackets are secured to the timber using four screws and are much easier than fixing directly to masonry, steel or aluminium studwork or safewall (which could be difficult and time-consuming to pre-drill. For example, Easifix direct to end post (no sleeve): 4 pilot holes per anchor bracket need to be pre-drilled. Four holes per anchor bracket x 11 blocks high x 2 sides = 88 pre-drilled holes. Hence Easifix sleeve!

If an Easifix panel is constructed into a timber stud wall and a clean line between the blocks and plasterboard is required, this can be achieved by omitting the Easifix sleeve and timber framing. However, re-calculate the opening size for just glass blocks and Easifix spacer, including perimeter expansion joint.

To install to a plasterboard opening, the screws must penetrate the plasterboard and be secured into the struts and noggins.

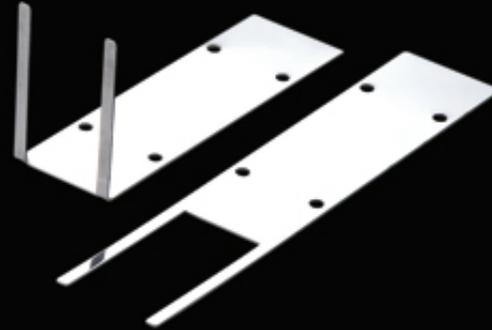
Easifix Extrusion

Easifix spacer is designed from the profile where the opposite collars of two glass blocks create an oval shape. The extrusion is an accurate fit to securely locate glass blocks and stably build a panel with a slim line joint of 4mm. The blocks are bonded to the spacer using Easifix adhesive both horizontally and vertically.

Uniquely designed the same profile is used for both the horizontal and vertical joints. Available in 2.4m for horizontal coursing and (circa) 184mm for use vertically.

Note: Constructing a glass block wall with joints less than 4mm is not recommended because:

- Panel stability may be compromised
- Less than 4mm may cause hairline or fracture cracks



Anchor Brackets

Easifix anchor brackets are located at each end of every horizontal spacer profile (except at the head). The two prongs should be bent to a 90° angle (with pliers) and then inserted into the chambers within the horizontal extrusion. After inserting anchor bracket prongs, apply a dab of Easifix building adhesive. Brackets should be connected to either the timber liner (inserted in Easifix sleeve) or perimeter stud framework

Anchor brackets provide the glass block panel restraint as it securely fastens the panel to the perimeter opening (similar to a brick tie or Rods & Mortar reinforcement rods).

These are manufactured from polished stainless steel, with four countersunk pre-punched holes for flat insertion of four screws.

(Screws not included).

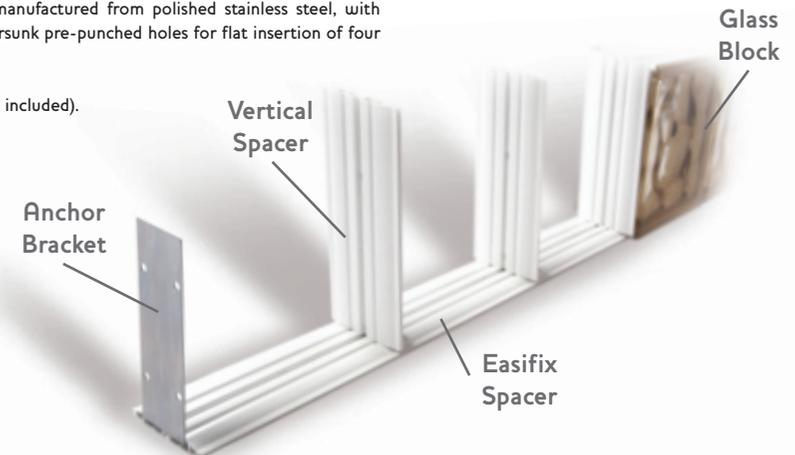


Easifix Adhesive

The extrusion is adhered to the blocks using Easifix adhesive, independently tested and verified for use.

It should be applied either in a zig-zag manner from side to side or as two perpendicular beads within the grooves of the profile.

Easifix adhesive is odourless and therefore ideal and for use in small enclosed areas. It will expand and contract by 50% of its own volume. Combining this with the Easifix extrusion (which is manufactured from PVC) allows the panel to expand and contract.





Calculating Opening Sizes

There are two formulae to calculate the opening size for Easifix:

Option 1 is to calculate the dimensions for the inside edge of the perimeter opening (including Easifix Sleeve and timber - as standard as per Matrix opposite).

Option 2 is to omit the Easifix Sleeve and timber.

Connecting to the Perimeter Opening

If an Easifix panel is constructed into a timber stud wall and a clean line between the blocks and plasterboard is required, this can be achieved by omitting the Easifix sleeve and timber framing. However, re-calculate the opening size for just glass blocks and Easifix spacer, including perimeter expansion joint.

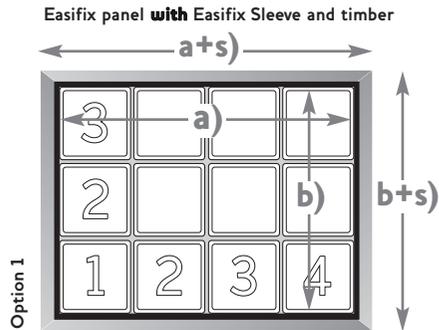
Stainless steel anchor brackets act like reinforcement rods and is how horizontal Easifix spacers are connected

and restrained to the framework (either Easifix Sleeve and timber or stud aperture). The brackets are located at both ends.

A glass block panel should never be freestanding (constructed just off the floor/base). For best integral strength a panel should be installed into a minimum of three sides, preferably four.

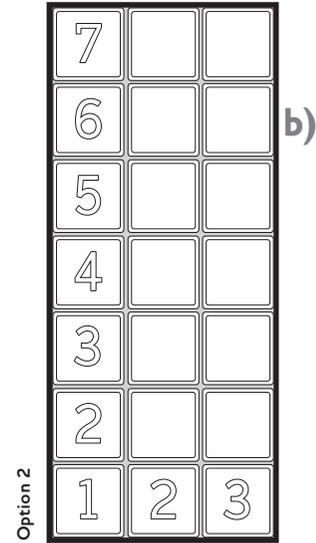
An open-ended panel using end glass blocks should not be built with Easifix but Rods & Mortar. The exposed edge would be a weak point.

Examples using slimline joints & 190x190mm glass blocks.



a) Width		b) Height	
190mm glass block		190mm glass block	
and 5mm joint:	<u>195</u>	and 4mm joint:	<u>194</u>
Number of blocks x4	<u>780</u>	Number of blocks x3	<u>582</u>
Plus fifth joint:	<u>6mm</u>	Plus fifth joint:	<u>6mm</u>
a) Minimum Opening Width: 786mm		b) Minimum Opening Height: 588mm	
Easifix Sleeve: x 2 @ 17mm		Easifix Sleeve: x 2 @ 17mm	
a+s) Minimum Opening Width incl. Sleeve and timber: 820mm		b+s) Minimum Opening Height incl. Sleeve and timber: 622mm	

Easifix panel without Easifix Sleeve and timber



a) Width		b) Height	
190mm glass block		190mm glass block	
and 5mm joint:	<u>195</u>	and 4mm joint:	<u>194</u>
Number of blocks x3	<u>588</u>	Number of blocks x7	<u>1358</u>
Plus fifth joint:	<u>6mm</u>	Plus fifth joint:	<u>6mm</u>
a) Minimum Opening Width: 591mm		b) Minimum Opening Height: 1364mm	

Notes:

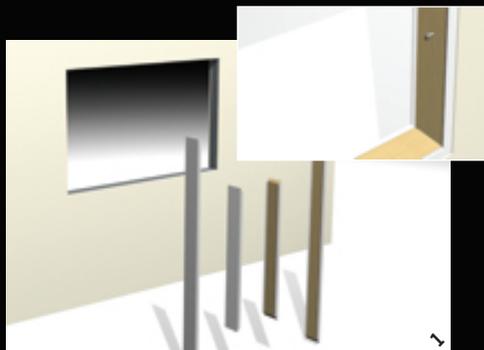
- Take the width of the block (e.g., 190mm).
- Add the width of the vertical spacer joint (5mm) width, (4mm) height.
- Multiply by the number of blocks in the horizontal/vertical course.
- Add one more joint width (6mm) as for four blocks you will have five joints.
- The final joint dimension is 6mm. This allows for 5mm at one end (4mm spacer and 1mm anchor

bracket) and 1mm to be added to the 4mm Easifix joint at the opposite end.

• Add 17mm Easifix Sleeve and timber to each end.

EF1/1 (235x234)	EF2/1 (430x234)	EF3/1 (625x234)	EF4/1 (820x234)	EF5/1 (1015x234)	EF6/1 (1210x234)	EF7/1 (1405x234)	EF8/1 (1600x234)	EF9/1 (1795x234)	EF10/1 (1990x234)	EF11/1 (2185x234)	EF12/1 (2380x234)
EF1/2 (235x428)	EF2/2 (430x428)	EF3/2 (625x428)	EF4/2 (820x428)	EF5/2 (1015x428)	EF6/2 (1210x428)	EF7/2 (1405x428)	EF8/2 (1600x428)	EF9/2 (1795x428)	EF10/2 (1990x428)	EF11/2 (2185x428)	EF12/2 (2380x428)
EF1/3 (235x622)	EF2/3 (430x622)	EF3/3 (625x622)	EF4/3 (820x622)	EF5/3 (1015x622)	EF6/3 (1210x622)	EF7/3 (1405x622)	EF8/3 (1600x622)	EF9/3 (1795x622)	EF10/3 (1990x622)	EF11/3 (2185x622)	EF12/3 (2380x622)
EF1/4 (235x816)	EF2/4 (430x816)	EF3/4 (625x816)	EF4/4 (820x816)	EF5/4 (1015x816)	EF6/4 (1210x816)	EF7/4 (1405x816)	EF8/4 (1600x816)	EF9/4 (1795x816)	EF10/4 (1990x816)	EF11/4 (2185x816)	EF12/4 (2380x816)
EF1/5 (235x1010)	EF2/5 (430x1010)	EF3/5 (625x1010)	EF4/5 (820x1010)	EF5/5 (1015x1010)	EF6/5 (1210x1010)	EF7/5 (1405x1010)	EF8/5 (1600x1010)	EF9/5 (1795x1010)	EF10/5 (1990x1010)	EF11/5 (2185x1010)	EF12/5 (2380x1010)
EF1/6 (235x1204)	EF2/6 (430x1204)	EF3/6 (625x1204)	EF4/6 (820x1204)	EF5/6 (1015x1204)	EF6/6 (1210x1204)	EF7/6 (1405x1204)	EF8/6 (1600x1204)	EF9/6 (1795x1204)	EF10/6 (1990x1204)	EF11/6 (2185x1204)	EF12/6 (2380x1204)
EF1/7 (235x1398)	EF2/7 (430x1398)	EF3/7 (625x1398)	EF4/7 (820x1398)	EF5/7 (1015x1398)	EF6/7 (1210x1398)	EF7/7 (1405x1398)	EF8/7 (1600x1398)	EF9/7 (1795x1398)	EF10/7 (1990x1398)	EF11/7 (2185x1398)	EF12/7 (2380x1398)
EF1/8 (235x1592)	EF2/8 (430x1592)	EF3/8 (625x1592)	EF4/8 (820x1592)	EF5/8 (1015x1592)	EF6/8 (1210x1592)	EF7/8 (1405x1592)	EF8/8 (1600x1592)	EF9/8 (1795x1592)	EF10/8 (1990x1592)	EF11/8 (2185x1592)	EF12/8 (2380x1592)
EF1/9 (235x1786)	EF2/9 (430x1786)	EF3/9 (625x1786)	EF4/9 (820x1786)	EF5/9 (1015x1786)	EF6/9 (1210x1786)	EF7/9 (1405x1786)	EF8/9 (1600x1786)	EF9/9 (1795x1786)	EF10/9 (1990x1786)	EF11/9 (2185x1786)	EF12/9 (2380x1786)
EF1/10 (235x1980)	EF2/10 (430x1980)	EF3/10 (625x1980)	EF4/10 (820x1980)	EF5/10 (1015x1980)	EF6/10 (1210x1980)	EF7/10 (1405x1980)	EF8/10 (1600x1980)	EF9/10 (1795x1980)	EF10/10 (1990x1980)	EF11/10 (2185x1980)	EF12/10 (2380x1980)
EF1/11 (235x2174)	EF2/11 (430x2174)	EF3/11 (625x2174)	EF4/11 (820x2174)	EF5/11 (1015x2174)	EF6/11 (1210x2174)	EF7/11 (1405x2174)	EF8/11 (1600x2174)	EF9/11 (1795x2174)	EF10/11 (1990x2174)	EF11/11 (2185x2174)	EF12/11 (2380x2174)
EF1/12 (235x2368)	EF2/12 (430x2368)	EF3/12 (625x2368)	EF4/12 (820x2368)	EF5/12 (1015x2368)	EF6/12 (1210x2368)	EF7/12 (1405x2368)	EF8/12 (1600x2368)	EF9/12 (1795x2368)	EF10/12 (1990x2368)	EF11/12 (2185x2368)	EF12/12 (2380x2368)

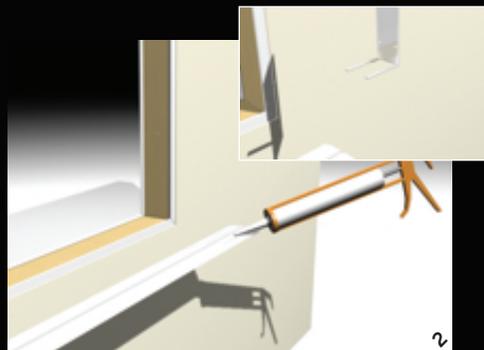
All matrix panels include Easifix Sleeve and timber.
For dimensions without Easifix Sleeve and timber, subtract: x2@17mm - 34mm.
ALL DIMENSIONS IN MM



Preparation of Opening

Cut 71 x 15mm planed timber and place into Easifix sleeve to create a neat finish. Mitre cut the corners of Easifix sleeve.

Lay out blocks and Easifix spacers dry to ensure modules fit. Secure frame horizontally and vertically to surfaces at 600mm centres ensuring it is both square and perpendicular.



Laying First Course

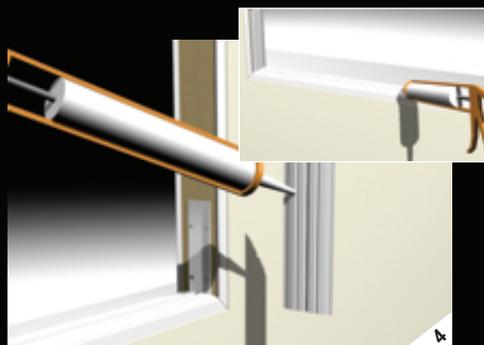
Cut long length of Easifix spacer fractionally shorter than the horizontal length of opening. Take two anchor brackets and bend prongs to a right angle using pliers. Insert prongs into holes of easifix spacer at each end.



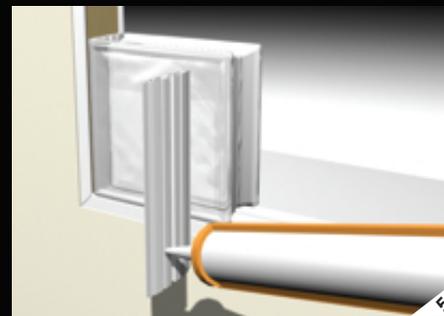
Laying First Course cont.

The first horizontal Easifix can be screwed to the base/cill providing a firm base to begin constructing the panel.

Note: The screw must be countersunk and not be in contact with any of the glass blocks. Silicon two 5mm beads of Easifix adhesive to the under-side of the Easifix spacer, fit to base of opening. Screw fix anchor brackets in place.

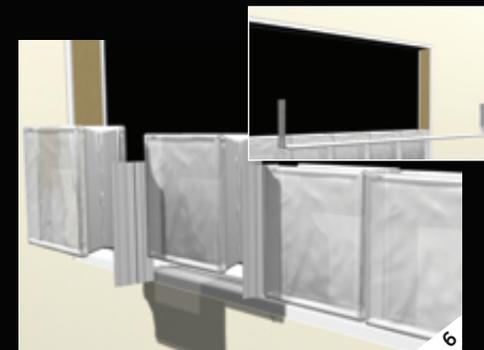


Take a 185mm length of spacer profile and silicon two beads of Easifix adhesive on one side. Place over the anchor bracket. Silicon two beads of Easifix adhesive to the Easifix spacer profile.

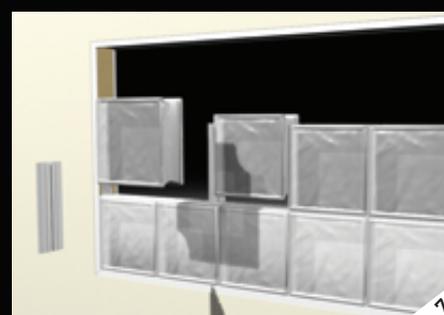


Laying First Course cont.

Fit first block. Take another piece of 185mm Easifix, apply Easifix adhesive and fit to exposed vertical of first block. Fit next block and repeat this process until first row is complete.



Note: Easifix spacer must always separate blocks from frame. Remember each row has to be secured with anchor brackets.



Finishing the Panel

Repeat previous steps to complete the next and following rows.



Sealing and Weatherproofing

When the wall is complete, caulk the joints with silicone. Alternatively, grout using a wide grout joint/Colmef Vetromix Glass Block Mortar.

The perimeter expansion joint should always be caulked with mastic to avoid bridging the expansion joint.

Initial Clean and After Care Maintenance

Do not clean with any acidic products. Periodic cleaning is required. The best product is clean water. Buff up with a chamois leather and polish each block with a soft, lint free cloth using good old elbow grease.

Note: Clean face of block as work proceeds.

The glass block installer should have left the glass block wall in a clean, unblemished condition, requiring only periodical cleaning to maintain an excellent appearance. However, there may be a residue of cement on the glass surface left from mortar/tiling grout identified by whitish bloom when dry. This may be removed by use of proprietary cement stain remover.

Hydrofluoric Acid or Derivatives Must Not Be Used

Paint or cement may be removed by a blade, taking care not to scratch the surface of the glass.



easifix precast

Precast Easifix

Precast Easifix has all the advantages of Easifix, being lightweight in comparison with Rods & Mortar and a 4mm joint.

Rather than constructing brick by brick, precast panels are made to measure. Panels can be fitted speedily, as single or inter-connecting panels, decreasing installation time on site.

Precast Easifix panels are secured in place using the two part U channel clamp, as per Precast concrete wall panels (80mm standard blocks). Available in white or alternatively can be powder coated to order.

Precast Easifix is ideal for speedy installation if multiple panels are required. Ideal for property developers and shopfitters.

Precast Easifix is made to order, therefore lead times apply.

