

GOLDEN RULES FOR RODS & MORTAR INSTALLATION

Golden Rules - essential guidelines that need to be considered prior to preparation of the opening and before beginning installation of glass blocks.

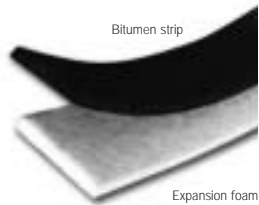
- ✓ Glass block walls are self supporting, but not load bearing. Therefore similar to doors & windows, support above should be provided in the form of a lintel.
- ✓ For best integral strength, glass blocks should ideally be installed into a four sided pre-prepared opening. This opening can be timber, brick, steel, concrete or block work.
- ✓ Glass blocks expand and contract with temperature change.
- ✓ Glass blocks should not be installed when the surrounding temperature is 5°C and falling or 30°C and rising.
- ✓ Expansion material must be incorporated to the perimeter opening & intermittently between vertical or horizontal joints if a panel exceeds 6m in any direction. Perimeter expansion should be weatherproofed by caulking with silicon and not grouted over with mortar. If grouted the joint is bridged, restricting expansion & contraction & may cause blocks to crack.
- ✓ Openings must be square and perpendicular and made to suit glass block modules. Glass blocks should not be cut like masonry bricks or tiles.
- ✓ Maximum panel size without intermediate support or slip joints is 25m² with no single dimension exceeding 6min any direction.



RODS & MORTAR ACCESSORIES

PERIMETER EXPANSION JOINTS

Expansion and contraction is one of the most critical aspects of any glass block construction. Expansion joints must be incorporated to the perimeter of all glass block panels.



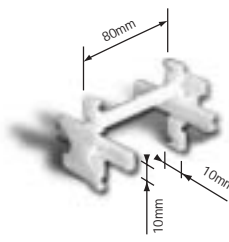
REINFORCEMENT

Stainless steel ribbed reinforcement rods are used to anchor glass block panels in place and increase integral strength. Reinforcement rods should be anchored into all substratas to a minimum depth of 25mm.



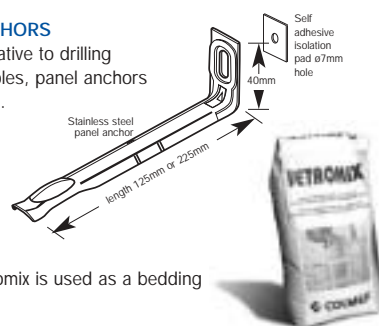
SPACER PEGS

10mm spacer pegs are available to assist with accuracy of construction and prevent mortar squeeze. When the spacer peg is fitted and the wall is finished, the tabs at the end twist off and this is then grouted over.



PANEL ANCHORS

As an alternative to drilling oversized holes, panel anchors can be used.

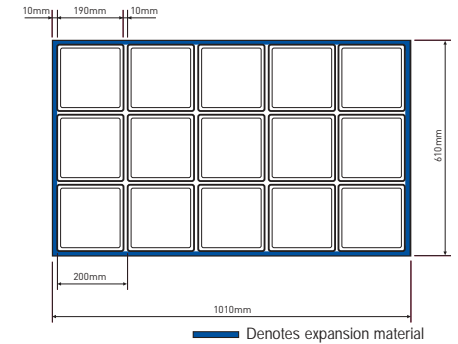


GLASS BLOCK MORTAR

Colmef Vetromix glass block mortar when constructing brick by brick. Colmef Vetromix is used as a bedding mortar and then by slightly diluting the mix it can be used as a grout for finishing.

CALCULATING OPENING SIZES

Calculating the opening size accurately is essential because glass blocks should not be cut like masonry bricks or tiles. The diagram demonstrates the principle of how to calculate an opening size based on using 190x190x80mm glass blocks and 10mm joints.



Calculating opening sizes

- Take the width of the block (eg. 190mm)
- Add the width of the vertical/horizontal joint (10mm)
- Multiply by the number of blocks in the horizontal/vertical course (eg 5 No.) 5 x 200 = 1000mm
- Add one more joint width (10mm) as for 5 blocks you will have 6 joints resulting in 1010mm.

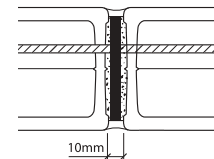
190mm glass block :	190
10mm joint :	+ 10
	<hr/> 200
Number of blocks :	x 5
	<hr/> 1000
Add sixth joint of 10mm:	+ 10
	<hr/> 1010mm

EXAMPLE :
Using 10mm joints
*The expansion material is incorporated into this measurement.

CURVED WALLS

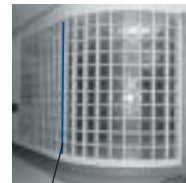
CURVED WALLS

Curved glass block walls can only be constructed using Rods & Mortar installation system. The principle of a curved panel follows the same guidelines as straight glass block walls, except the front vertical joint is opened to form a curve.



EXPANSION JOINTS

Perimeter expansion should be allowed for around all four sides of the panel, ensure caulking with silicon weatherproofs this joint and not grouted over with mortar. Where a curve changes plane, a vertical slip joint must be inserted.



Denotes position of vertical slip joint.

JOINT SIZES AND MINIMUM RADII

When constructing curved glass block panels, the use of a 10mm internal vertical joint is recommended. Using 190x190x80mm glass blocks, the minimum internal radius of 1650mm will result in the external vertical joint being 18-19mm. Note importance of minimum radius and expansion joints.

