



SECTION ON 'A' - 'A'

TYPICAL CONSTRUCTION DETAIL

FOR RODS & MORTAR

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TYPICAL GLASS BLOCK PANEL SUPPORTED ON THREE SIDES

**GBT113** 

1:7.5 & 1:2

The data sheet connection detail & construction principles, should be designed and be specific to each project requirement or environment & calculations checked and qualified by independant structural engineers.

2. Openings must be square and perpendicular and the opening dimensions must be designed to suit glass block modules Glass blocks cannot be cut like masonary pricks or files. To calculate the minimum opening size based on using 190 x 190 x 80mm blocks with 10mm joints, multiply the number of blocks by 200mm (190 block; a 10mm joint) then add 10mm for the other mortar joint. This is the minimum opening requirement. 10mm mortar joints are the most commonly used 6mm spacers can also be used for thinner joints, if openings have been prepared incorrectly our firetine installing glass blocks or to create a tighter radii, when building a curved glass block panel.

1. Glass block walls are self supporting, but not load bearing. In addition to their own weight, they can withstand wind loads, horizontal live loads and impact loads. A lintel provides the head for the panel to be anchored into whilst ensuring no downward pressure is placed on the glass blocks.

Glass blocks will expand and contract by 0.25mm per 25°C temperature change. Soft expansion joints must be incorporated into the perimeter between the substrate opening and block being caulted with a white silicone (or fire-stop mastic). This will usually look similar to a standard mortar joint. For the head and jambs of an opening, 10mm thick foam is used. This is a white expansion fiber. The horizontal expansion flort between the first row of glass blocks and the base of the opening is formed using high-density bitumen or neopence natieral to support the weight of the panel. Alternatively two coats of bitume emulsion can be applied as the barrier between the bottom course mortar joint and base of opening. The open unsupported edge if subjected to impact may vibrate ever so slightly, not a major area for concern, just a point that should be noted, when considering the location of this style of panel relevance to its environment or application. For example it is highly advisable not of use this panel style in a nightclub, bar environment or in an area subjected to high levels of general public traffic.

A corner glass block wall using corner glass blocks (rule not applicable when using sarewall corner glass block all using corner glass blocks (rule not applicable when using this complicated corner glass blocks are a good solution to linking striaght or curved panels around a 9% angle.

One vertical adge must be anchored to a wall, the secondary panel connected by the corner block, could be striaght or curved or open ended and stapped using an end block and double end block combination. Two sets of corner blocke may be used to link three glass block panels together to create an enclosed space or large walk-in shower (for example.) example.
When building with corner glass blocks a vertical slip joint must be incorporated in either the 2nd or 3rd joint away from the corner block. Coline! Vetronix is a specifically designed and formulated premix mortar for glass block constructionit ensures accuracy and consistency of performance. It can be used internally, externally, straight, curved and fire-rated glass block walting. Vetronix has a fine texture, low stump and the whitest mortar available. It is used as bedding and pointing mix, therefore there are no bonding issues between building and grouting. Mixing instructions are on the reverse of each bag and should be strictly athered to 10 kilos instructions are on the reverse of each bag and should be strictly athered to 10 kilos will build approximately twelve 190 x 190 x 80 blocks. The surrounding temperature should not be 5°C and falling or 30°C and rising and the joint width should not exceed 22mm. flown is the most common joint size for specifying and building glass blocks. A 190 x 190 block plus flows paper modulates to 200mm. Spacer pegs serve multiple functions. They prevent mortar squeeze, increasing the number of courses that an be constructed in a day. They prevent stankess steel reinforcement bars coming into direct contact with the glass block as metal and glass have different expansion and contraction properties. When a spacer peg is ciffred and the wall is finished, the tabs at he end fuist off and can then be grouted over. 4. Between the opening and glass blocks it is essential to incorporate expansion joints to the perimeter to allow the panel to expand and contract freely with temperature thange. The foam must not bridged by mortar freeder/plaster etc. I and caulked with Rods & Mortar expansion joint sealer (fire-retardent in fire-rated applications). After construction, the perimeter joint should be cleared of any residue mortar and valued with Roots & Mortar expansion sealant for fire stop mastic). Bridging the joint valued exist of the stop of the construction of the seal of t ther spacers are available for the 80mm-thick blocks-6mm x 6mm and 6mm x 10mm Also for 100mm-thick blocks - 10mm x 10mm. or struations where connecting the rods to the opening may prove dirficult, panel notors can be used (similar to the brick-tie principle secured by either screw or bolt xing or can mechanically shot fired). panel supported at the base and restrained into just one vertical side (jamb) will obably be finished using end glass blocks and a double-end glass block at the open tree to make the panel acted by a stability pleasing of increase the panel streep, uble stainless reinforcement bars, each course horizontally, must be incorporated. slass block walls are connected to the surround by reinforcement bars being inserted pore-drilled holes for panel anchors!, For Dest Integral strength, panels should be talled into a four sided pre-prepared opening. The opening can be timber, brick, steel, knete or block-work. nection details are purely representative to demonstrate the principals how glass class can be constructed with U channels, or box sections, either for structural and citical purposes, i.e.: interface of glass blocks and render or aesthetical use. inless steel ribbed reinforcement bars are used to lie to the opening. The rods that are the expansion material and anchor the panel in place by connecting to the meter frame. This can be loaded by drilling an over sized hole a minimum depth of 50mm an should be filed withsillione to cushion any movement of the re-bar. Rods 200mm long and when the panel is larger than the reinforcement bar, rods are tapped by a minimum of 150mm and are loosely joined using the wire/cable tie. channel, PFC and box section o sing standard glass blocks the maximum panel size without intermediate support or joints is 25m°, with no dinension exceeding 6m in either direction. For TF30 and TF60 blocks, the maximum panel size permissable is 9m² (in line with test specification). einforcement bar should be used in each horizontal and vertical joint as a minimum. rods may be required if using end glass blocks or a TF30 or TF60. tion detail principles, should be designed and be specific to each project ment and calculations checked and qualified by independant structural engineers JASSBLOCK JIECHNOLOGY