



## **TYPICAL DETAIL INFORMATION AND CODE LIMITATIONS SEVES Glass Block Products**

- A. Hollow glass blocks, Premiere™ Series – 3-7/8" thick, Thinline® Series – 3-1/8" thick, Basic Profile 80mm and special shapes. All blocks are designed for a modular face dimension of 4", 6", 8" and 12" using ¼" thick mortar joints for Imperial sized block.
- B. Mortar shall conform to ASTM C270 Type 'S' for maximum bond strength.
- C. Horizontal mortar joints with panel anchors shall have wire reinforcing of 1-5/8" wide consisting of two 9 gauge parallel wires with cross ties 16" on center. All reinforcing to be #304 stainless steel.
- D. Panel anchors to be 1-3/4" x 16" x 20 gauge stainless steel with elongated perforations. Locate panel anchors in same joint as horizontal reinforcing. Panel anchor to be installed in horizontal joint of masonry wall if possible and embedded 12". For alternate connection, return panel anchor up face of jamb and add two 1/4" anchors with washers just above bend of anchor. Anchors to be in horizontal alignment.
- E. Aluminum channels in lieu of panel anchors are an acceptable alternate.
- F. Head and jamb channel to be 1-1/2" x 4-1/2" x 14 gauge for Premiere™ Series and 1-1/2" x 3-3/4" x 14 gauge for Thinline® Series and Basic Profile. Channels used for exterior installations should have hot dipped zinc coating, Stainless Steel or Non-Ferrous Metal.
- G. All glass block panels to be non-load bearing and isolated from surrounding structures/walls with 3/8" thick glass fiber or white polyethylene foam expansion strips at jambs and head. Sill to be coated with asphalt emulsion to serve as a bond breaker.
- H. Structural members around glass block panels shall be limited to a deflection of L/600.
- I. Provide for vertical expansion joints where straight walls and curved walls (radius larger than 24") intersect or at a reversal of the curved wall on exterior applications
- J. Expansion material at jambs may be omitted for panels with areas of 25 sq. ft. or less. Expansion joint at head must be maintained.
- K. All steel within the wall system should be #304 stainless steel to minimize rust and staining.
- L. Limitation of panel sizes:
  - 1. Exterior wall panels using Premiere™ Series (3-7/8" thick) block exposed to 20 lbs./square foot wind load to be limited to 144 square feet when supported on all four sides. Area may be increased to 250 square feet when an intermediate stiffener is incorporated as an additional supporting member near the middle of the panel and span is not longer than 10 feet. Maximum height to be 20 feet and maximum width to be 25 feet except where the International Building Code limits height and width to 15 feet.
  - 2. Interior wall panels using Premiere™ Series (3-7/8" thick) block to be limited to 250 square feet. Max. height to be 25 feet and max. width to be 25 feet except where the International Building Code limits height and width to 15 feet.

3. Exterior or interior wall panels using Thinline® Series (3-1/8" thick) block, exposed to 20 lbs./square foot wind load or less to be limited to 85 square feet when supported on all four sides. Area may be increased to 150 square feet when an intermediate stiffener is incorporated as an additional supporting member near the middle of the panel. Maximum height is limited to 10 feet for exterior and 20 feet for interior installations. Maximum width is limited to 25 feet for exterior and interior.
4. Check governing building code for additional details.
5. Contact SEVES (1-877- SEVES11 (1-877-738-3711)) for design of glass block panels subjected to a wind load greater than 20 lbs./sq. ft. and for design of free standing exterior panels.

## **FIRE RATINGS - GYPSUM BOARD CONSTRUCTION**

### **GLASS BLOCK IN NON-MASONRY WALLS WITH PANEL ANCHOR CONSTRUCTION**

Rating: 45 or 60 minutes

1. Steel studs below sill to be 3-5/8" x 20 gauge 8" on center (Max. length of 36") with a 3-5/8" x 20 gauge runner channel to create base for glass block.
2. Each jamb to be 3-5/8" x 20 gauge steel stud and runner channel. Gypsum board to be installed between stud and runner channel.
3. Head to be (2) 3-5/8" x 20 gauge studs with (2) runner channels.
4. Panel anchors to be 1-3/4" x 20 gauge x 16" stainless steel. They should be located above first course and in every other joint above. Secure panel anchor with (2) self-drilling, self-tapping screw fasteners. Fasteners to be located at the top of slots and immediately above bend of the panel anchor. Install panel anchors at head in every other vertical mortar joint.
5. Horizontal mortar joints with panel anchors shall have wire reinforcing of 1-5/8" wide consisting of two 9 gauge parallel wires with cross ties 16" on center. All reinforcing to be #304 stainless steel.
6. Fill space between glass block and channel with glass fiber, mineral wool or polyethylene and seal with appropriate silicone sealant.
7. Various available spacers may be used to install Vitrablok / SEVES Brand Glass Block.

### **GLASS BLOCK IN NON-MASONRY WALLS WITH CHANNEL CONSTRUCTION**

Rating: 45 or 60 minutes

1. Steel studs below sill to be 3-5/8" x 20 gauge 8" on center (Max. length of 36") with a 3-5/8" x 20 gauge runner channel to create base for glass block.
2. Each jamb to be 3-5/8" x 20 gauge steel stud and runner channel with 14 gauge channel secured 16" on center.
3. Head conditions similar to jamb for interior installations. Channel at sill is optional.
4. Horizontal reinforcing for Premiere™ and Thinline® Series block (3-7/8" thick) to be 1-5/8" wide consisting of two 9 gauge parallel wires with cross ties 16" on center. All reinforcing to be #304 stainless steel.
5. All mortar shall meet ASTM 270 be Type S.
6. Glass block to be placed 1" deep into recess. Recess to be formed of 1-3/4" deep steel

channel. Steel channel to be 14 gauge. Do not use channel at sill for exterior installations.

7. Fill space between glass block and channel with glass fiber, mineral wool or polyethylene and seal with silicone caulk.
8. Various available spacers may be used to install VitraBlok / SEVES Brand Glass Blocks

## **FIRE RATINGS - MASONRY CONSTRUCTION**

### **GLASS BLOCK IN MASONRY WALLS WITH PANEL ANCHOR CONSTRUCTION**

Rating: 45 or 60 minutes.

1. Panel Anchors to be 1-3/4" x 20 gauge x 16" long #304 stainless steel. Locate above first course and in every other joint above. Secure panel anchor with (2) self-drilling, self-tapping screw fasteners. Fasteners to be located at top of slots and immediately above the bend of the panel anchor. Install panel anchors at head in every other vertical mortar joint.
2. Horizontal mortar joints with panel anchors shall have wire reinforcing of 1 5/8" wide consisting of two 9 gauge parallel wires with cross ties at 12" or 16" on center. All reinforcing to be #304 stainless steel.
3. All mortar shall meet ASTM 270 and be Type S.
4. Sill to be coated with asphalt emulsion to serve as bond breaker.
5. Fill space between glass block and channel with glass fiber, mineral wool or polyethylene foam expansion material and seal with silicone caulk.
6. Various available spacers may be used to install VitraBlok / SEVES Brand Glass Block.

### **GLASS BLOCK IN MASONRY WALLS WITH CHANNEL CONSTRUCTION**

Rating: 45, 60 or 90 minutes

1. Horizontal reinforcing for Premiere™ and Thinline® Series block (3-7/8" thick) to be 1-5/8" wide consisting of two 9 gauge parallel wires with cross ties 12" or 16" on center. All reinforcing to be #304 stainless steel.
2. All mortar shall be Type S.
3. Glass block at head and jambs to be placed 1" into 1-1/2" deep recess. Recess to be formed of masonry or 1-3/4" deep steel channel. Steel channel to be 14 gauge hollow metal for 45 or 60 minute openings and steel channel (C5 x 6.7) for 90 minute openings. Do not use channel at sill for exterior installations. Sill to be coated with asphalt emulsion to serve as bond breaker.
4. Fill space between glass block and channel with glass fiber, mineral wool or polyethylene and seal with appropriate silicone sealant.
5. The installation of glass block will be more easily accomplished if the lintel is not installed until the top course of glass block has been installed.
6. Various available spacers may be used to install Vitrablok/ SEVES Brand Glass Block.