



**SPECIFICATION FOR INSTALLATION OF LIGHTWISE® ARCHITECTURAL SYSTEMS
USING A 2-PIECE ALUMINUM FRAME**

1. SCOPE

- 1.1. This specification covers the installation of Seves Glass Block LightWise® Architectural Systems. These systems consist of glass block panels using a 2-piece aluminum frames
- 1.2. Product Data Sheets and/or Material Safety Data Sheets referenced herein are listed at the end of the specification and may be obtained from www.sevesglassblock.com
- 1.3. See sizing charts to determine proper sized openings for glass block panels.

2. GENERAL

- 2.1. This specification is subject to revision without notice; contact Seves Glass Block for current revision data before using. This specification is offered as a guide for the purpose described herein and should be employed at the discretion of the user. No warranty of procedures, either expressed or implied, is intended.
- 2.2. The installation contractor and project owner shall provide sufficient inspection during the installation of Seves Glass Block's LightWise® Architectural System. Continuous inspection of the installation is not considered a requirement of Seves Glass Block.
- 2.3. This specification does not and cannot address all situations and installation methods. Contact Seves Glass Block for alternate methods and materials.
- 2.4. The information provided is to be used as a guide and is not inclusive of all means and methods, nor indicative of all field conditions or safety requirements that may arise. The installing contractor is fully responsible for preparing their own "site specific installation" and "safety compliant" plan which vary from site to site and from state to state.

3. MATERIALS

- 3.1. Glass Block Panel consists of glass blocks, spacers, and sealant.
- 3.2. 2-piece Aluminum Frame including Primary Channel (attached to opening) and Secondary Channel (attached to Primary Channel).
- 3.3. Frame Anchors as specified in shop drawings (determined by system and structural substrate)
- 3.4. Gaskets for Primary Channel (solid gasket) and Secondary Channel (hollow gasket)
- 3.5. Seves Glass Block Sealant



4. INSTALLATION – GENERAL

- 4.1. For proper adhesion of sealant, clean all surfaces prior to applying the sealant using "2 RAG WIPE." Do not prep more than can be completed in a day. First wipe - apply solvent to rag [denatured alcohol, IPA - isopropyl alcohol (rubbing alcohol) w/25% water] and wipe joint. Second wipe immediately wipe off with a dry rag.
- 4.2. Install all sills, corners, border and filler items as may be necessary as integral components of the glass block panel system, complete in all respects. The tops, bottoms, and vertical edges of the entire panel system shall have finished returns and be weather tight.
- 4.3. The installation shall provide for the expansion and contraction of all materials of the panel system and substrate. The glass block panels shall be installed so that no restraints are placed on the panels which could result in compressive stresses. The panels must remain vertical, plumb and level at all times regardless of temperature change, and at all times remain air and water tight.
- 4.4. The fasteners shall be as recommended by the glass block panel system manufacturer.
- 4.5. Erect glass block panels level, plumb, and true to line, in accordance with the approved shop drawings.
- 4.6. Keep dissimilar metals apart with gaskets, fasteners or as otherwise necessary to preclude the possibility of corrosive or electrolytic action between dissimilar metals.
- 4.7. Aluminum shall be kept from direct contact with dissimilar metals and masonry work.
 - 4.7.1. Where aluminum framing work adjoins, or is to be anchored to, or supported by, steel supporting members or other dissimilar metal parts, the aluminum shall be kept from direct contact with such parts in a manner recommended by the aluminum framing manufacturer and approved by the architect.
 - 4.7.2. Where the aluminum framing work adjoins, or is to be anchored to, or supported by, masonry work, the aluminum shall be kept from direct contact with the masonry in a manner recommended by the aluminum framing manufacturer and approved by the architect.

5. SHIPPING, HANDLING & STORAGE

- 5.1. Glass block panels must be maintained in an upright position during shipping and while stored.
- 5.2. All materials should be stored in the original factory packaging under cover and be kept dry until ready for use.
- 5.3. Immediately, before installation, carefully remove all protective wrapping and support lumber from Glass block panels without damaging panels.
- 5.4. Inspect all materials and ensure they are in good condition. Do not install damaged materials; contact Seves Glass Block.

6. PREPARATION

- 6.1. Verify the size of the opening and that the substrate is sound and smooth. Opening must be square, plumb and level.
- 6.2. Depending on the size and weight of the units, it may be necessary for the installation contractor to provide OSHA safety compliant rigging, material handling, and related man lifts or hoisting equipment. The use of fork truck and man lift jigs, and attachments to safely load, off load, maneuver, transport, handle and install the glass block panel system are the responsibility of the installation contractor. A "pre-installation procedure" meeting shall be arranged prior to the start of manufacturing, as required, as well as a site specific safety plan shall be provided by the installation contractor, prior to receipt and installation of the glass block panel systems.



- 6.3. The substrate to which the panel systems are attached shall be even, smooth, clean, dry, structurally sound, and free from defects detrimental to the finished glass block panel system installation.

7. INSTALLING PRIMARY FRAME CHANNEL

- 7.1. Apply a generous bead of sealant to the outside perimeter of the primary frame channel prior to placing and anchoring the frame channel into the opening.
- 7.2. Place the primary frame channel in the opening as specified by the project designer.



- 7.3. Shim as required to level and plumb the primary frame channel while ensuring that tight miter corner joints are maintained.



- 7.4. Seal all miter corner joints on the inside of the channel.
- 7.5. Anchoring the primary frame channel. **Note:** The type of anchor and the anchor spacing are dependent on the specific LightWise® Architectural System Window installed and substrate. Please see Appendix A, the LightWise® Architectural Systems Anchoring Guide for additional detail.
- 7.5.1. It is recommended that anchor holes are pre-drilled and be slightly larger than the anchor used to prevent puffing on the aluminum. Placing a shim at this location will add additional support to prevent pulling/disfiguring.
- 7.5.2. Install specified anchors through the frame into the substrate in, making sure to avoid over torque causing disfigurement of the framing system.
- 7.6. Complete fastening and shimming as required, and then verify levelness, plumb, and square. Repeat the above steps as necessary until all tolerances have been satisfied.
- 7.7. Ensure there are no exposed fasteners or evidence of fasteners telegraphing through the primary frame channel or any compromise whatsoever of a neat and flat appearance.

8. INSTALLING PRIMARY FRAME CHANNEL GASKET

PROPER GASKET/SEALANT INSTALLATION/ILLUSTRATIONS



Right

(gaskets must meet flush at corners)



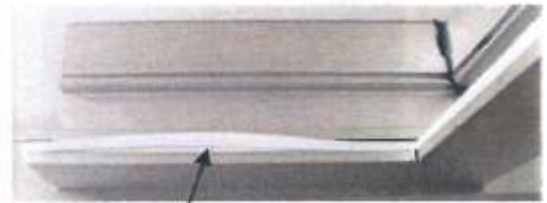
Wrong

(gaskets should not extend past their corners)



Right

(gasket must be seated in gasket groove)



Wrong

(gasket must not be crimped or stretched)

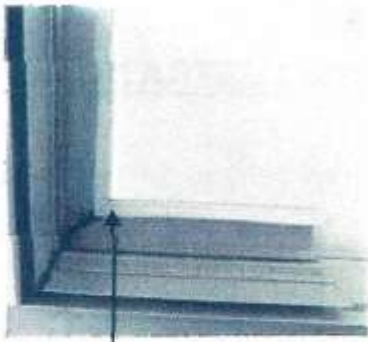


Right

(Wide side of the gasket must be tucked within channel to accommodate sealant, not protruding above frame perimeter)



Wrong

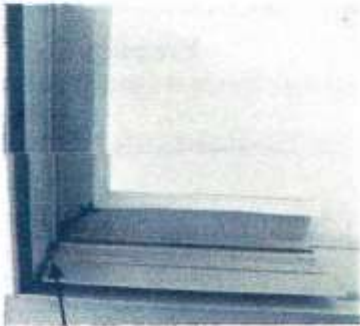


Right

(gaskets must be flush in corners and be free of any gaps)



Wrong



Right

(interior corner seam of channels must be sealed on interior side)



Wrong



Right

(gasket must be seated properly to create a joint to accommodate sealant)



Wrong



Right

(Hollow gaskets are attached to the secondary channel to allow it to snap into place)

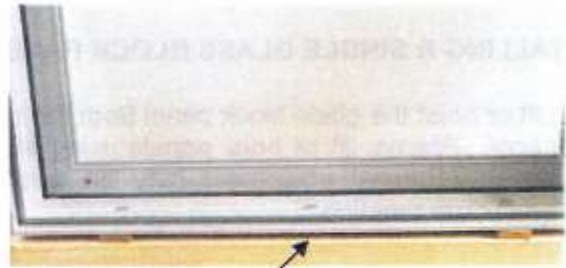


Wrong



Right

(shims are inserted at all screw locations)



Wrong

- 8.1. Cut primary frame channel gasket 1" longer than channel using utility knife and miter the corner. Install into frame, cut to size by mitering other corner. Note: hollow gasket is for secondary channel and solid gasket is for primary channel.



- 8.2. Gasket material must be cut and mitered precisely to align properly in corners and should not protrude or gap at the inside corner.

- 8.3. Press the gasket material into the primary frame channel taking care not to stretch or pull the gasket. No gaps should be visible. (As described in pictures above)

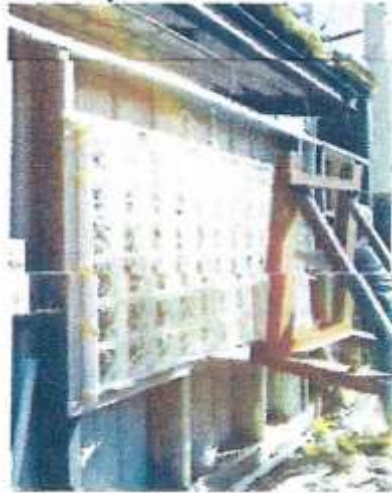


9. INSTALLING A SINGLE GLASS BLOCK PANEL IN A SINGLE OPENING

- 9.1. Lift or hoist the glass block panel from the bottom. Do not lift panel from top as this could damage the panel. Always lift or hoist panels using an appropriate method, factoring the size and weight of the panel. Special equipment may be necessary and should be discussed at any pre-installation procedure meeting.



- 9.2. Carefully align and position the glass block panel before moving it into position.



- 9.3. After positioning the glass block panel, check that the primary frame channel gasket was not dislodged and is in place. Reposition if necessary.
- 9.4. Press glass block panel firmly against the primary frame channel gasket.



- 9.5. Temporarily brace and hold in position with equipment while aligning and positioning the secondary frame channel.
- 9.5.1 Install the top and bottom sections of the secondary frame channel by positioning and inserting the secondary frame channel into the primary frame channel.
- 9.5.2 Tap the secondary frame channel pieces with a rubber mallet until there are securely locked into the primary frame channel. You should hear the secondary frame channel pieces snap into place.



9.5.3 Repeat this procedure for the right and left side of the glass block panels

I. **OPTION TWO:** Single panel installation - Method 2

- Install primary channel and gaskets as per previous instructions.



- This panel is designed with blocks left out to accommodate a fork lift.
- Using specially rigged forklift, load and secure preassembled panel to lift and move to location.



Panel is secured to lift.



Panel is lifted from shipping crate.



Panel is moved to location.

- a) Carefully align and position the glass block unit before moving into framed opening. After positioning the unit, check gaskets in the primary channel and reposition if necessary .



Carefully align panel on all sides before moving into framed opening.

- b) Once the alignment of the panel has been determined to be correct, place it into the framed opening. Attach sides of secondary channel (with gaskets properly installed) onto face of panel locking into place.



- c) Once the panel is secured into the opening on both sides, remove special equipment.



- d) Installation of the four (4) remaining glass blocks.



1. Cut one side (leg) of channel off. Position blocks shipped with unit into opening as shown. Run a double bead of the Seves Glass Block Sealant along the top of the block, inside the raised edges.



2. Tap block into place.



3. Insert precut section of plastic perimeter channel between glass block and aluminum channel. Secure with a bead of the Seves Glass Block Sealant.



4. Run a bead of the sealant around perimeter of the glass block. Repeat this procedure with the remaining three (3) blocks.

- e) Install remaining secondary channel.



II. OPTION THREE: Energy Efficient Glass Block Panel.



- a) Carefully align panel and insert into pre-framed opening.



- b) Position blocks shipped with unit into opening as shown. Run a double bead of the glass block sealant along the top of the block.



- c) Tap block into opening and insert the pre-cut piece of plastic perimeter channel between the block and the aluminum channel.



- d) Once the block is in place, run a bead of Pittsburgh Coming Glass Block Sealant around the perimeter of the block.

10. INSTALLING MULTIPLE GLASS BLOCK SECTIONS INTO A SINGLE OPENING



- 10.1. A LightWise® Architectural System Window consisting of multiple glass block panels will be shipped with only partial protective PVC edging.
 - 10.1.1. The top and bottom glass block sections of the window will have the protective PVC edging on three sides, the top/bottom and the sides.
 - 10.1.2. The center section, if applicable, will have the protective PVC edging on two sides only.
 - 10.1.3. All top and center glass block sections will have a spacer installed along the bottom of the first glass block course. Bottom sections will not have a spacer.
- 10.2. Lift or hoist the glass block sections from the bottom. Do not lift sections from top as this could damage the sections. Always lift or hoist sections using an appropriate method factoring the size and weight of the panel. Special equipment may be necessary and should be discussed at any pre-installation procedure meeting.
- 10.3. Carefully align and position the bottom glass block section before moving it into position.



- 10.4. After positioning the bottom glass block section, check that the primary frame channel gasket was not dislodged and is in place. Reposition if necessary.

- 10.5. Press glass block section firmly against the primary frame channel gasket.
- 10.6. Install safety clips on both sides of the bottom glass block section.



- 10.7. Apply two ¼" beads of sealant across the top of the bottom glass block section behind the edges of the glass blocks.



- 10.8. Place temporary shims on top of bottom glass block section.



- 10.9. Carefully align and position the center glass block section on top of the bottom glass block section.



- 10.10. Install safety clips on both sides of the center glass block section.



- 10.11. Remove temporary shims.
- 10.12. Repeat this procedure if there are multiple center glass block sections to be installed in the opening.
- 10.13. Apply two ¼" beads of sealant across the top of the center glass block panel behind the edges of the glass blocks.
- 10.14. Place temporary shims on top of center glass block section.
- 10.15. Carefully align and position the top glass block section on top of the center glass block section(s).
- 10.16. Install safety clips on both sides of the center glass block section.
- 10.17. Remove temporary shims.
- 10.18. Seal the horizontal joints between the glass block sections by applying a 1/8" bead of sealant in the horizontal joints.
- 10.19. Use a finishing tool to seal and finish the joints.

11. INSTALLING SECONDARY FRAME CHANNEL GASKET

- 11.1. Cut secondary frame channel gasket 1" longer than channel using utility knife and miter the corner. Install into frame, cut to size by mitering other corner. Note: hollow gasket is for secondary channel and solid gasket is for primary channel.

- 11.2. Gasket material must be cut and mitered precisely to align properly in corners and should not protrude or gap at the inside corner.
- 11.3. Press the gasket material into the secondary frame channel taking care not to stretch or pull the gasket. No gaps should be visible. (refer to pictures in section 8)

12. INSTALLING SECONDARY FRAME CHANNEL

SINGLE PANEL

- 12.1. To install the secondary frame channel, carefully position then insert the secondary frame channel into the primary frame channel.
- 12.2. Tap the secondary frame channel with a rubber mallet until it is securely locked into the primary frame channel. You should hear the secondary frame channel snap into place.

PANEL WITH MULTIPLE SECTIONS

- 12.3 Install the top and bottom sections of the secondary frame channel by positioning and inserting them into the primary frame channel.



- 12.4 Tap the secondary frame channel pieces with a rubber mallet until they are securely locked into the primary frame channel. You should hear the secondary frame channel pieces snap into place.
- 12.5 Remove the safety clips from the left side of the glass block panels by pulling gasket to release clip. Position and install the secondary frame channel into the primary frame channel.



12.2.1. Repeat this procedure for the right side of the glass block panels.

13. SEALING GLASS BLOCK PANELS

13.1. Seal joint over the rubber gasket, between the channel and glass block.



13.2. Seal completely around the perimeter of the channel, between the channel and the structural framing.
Note: if this joint is larger than 3/16" fill with backer rod or equal material before sealing.

13.3. Inspect all sealed joints including: around perimeter between aluminum channel and glass block at gasket material; around perimeter between aluminum channel and structural substrate on both the interior and exterior sides.





14. MAINTENANCE & RECOMMENDED CARE

- 14.1. Clean and maintain the glass block with common household glass cleaner.

15. PRODUCT DATA SHEETS

This specification was prepared by Seves Glass Block Inc. Using generally accepted and appropriate technical information and is not intended to be solely relied upon for specific design or technical applications. All statements are given in good faith but their accuracy and completeness are not guaranteed. They do not constitute and shall not be deemed to make any warranty or representation as to quality, merchantability or fitness for a particular purpose. All products are sold subject to Seves Glass Block Standard Terms and Conditions of Sale, which are available on request. Seves Glass Block has no control over the elements of design, installation, workmanship or site conditions. Accordingly, the user shall determine the suitability of the products for their intended use prior to purchase and shall assume all risk and liability in connection therewith. Seves Glass Block disclaims all liability potentially arising from the use or misuse of this specification. The information contained herein is under constant review and subject to change from time to time.