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201 NORTH FIGUEROA STREET  
LOS ANGELES, CA 90012

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EXECUTIVE OFFICER

Sentech Architectural Systems  
4509 Freidrich Lane, Suite 102  
Austin, TX 78744

Attn: David Dunham  
(512) 266-7045

RESEARCH REPORT: 26146  
(CSI # 08800)

#### REEVALUATION DUE

DATE: September 01, 2020  
Issued Date: September 01, 2018  
Code: 2017 LABC

**GENERAL APPROVAL** – Sentech Architectural Systems VetraFin Glass Fitting.

#### **DETAILS**

The VetraFin VFA-LR fitting is used to connect 1-1/4” thick laminated glass to support structure or façade elements. The fitting is made from ASTM A276 type 316 stainless steel (SS).

The support structure or façade element is connected to the two VFPL-LR plates that are attached to the glass with two pin assemblies; each assembly consists of a VFPN-LR pin and two VFPB-LR bolts. The VFPN-LR pin is a machined rod with internal threads at each end to connect to the externally threaded VFPB-LR bolts that tie the pins to the VFPL-LR plates. VFGK-LR Delrin gaskets isolate the VFPL-LR plates from the face of the glass and a VFGR-LR Delrin grommet is placed over each VFPN-LR pin as detailed on the attached drawing of the VFA-LR fitting.

The connection between the fitting and the glass is a full bearing connection achieved by injecting Hilti HY-70 epoxy through the access holes in part numbers VFPB-LR and VFPL-LR.

See Table 1 below for assembly parts, glass composition and allowable assembly loads.

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Table 1: Glass Fitting Assembly and Allowable Loads

Fitting Part Number	Pin Part Number	Glass Composition	Minimum Edge Distance (in.)	Minimum End Distance (in.)	Allowable Load in Tension (lbs)	Allowable Load in Shear (lbs)
VFA-LR	VFPN-LR	3/8" thick clear tempered glass, 0.060" SGP interlayer, 3/8" thick clear tempered glass, 0.060" SGP interlayer, and 3/8" thick clear tempered glass	3	6	10,774	2,850

**The approval is subject to the following conditions:**

1. The approval is only for the Sentech VetraFin VFA-LR fitting when installed in the glazing material as described above.
2. Design calculation and details of the glazing system shall be prepared and stamped by a Civil or Structural Engineer licensed by the State of California and shall be submitted to Structural Plan Check for approval.
3. The connection of the VFA- fitting to the supporting structure, and the supporting elements shall be designed according to the applicable design standards referenced by the Los Angeles Building Code.
4. The VFA-LR fitting shall be installed to approximately 4 ft-lbs. No movement shall be accommodated at the glass to the VFA-LR connection.
5. The minimum edge and end distances shall be as listed in Table 1 above.
6. The fitting as described above have the allowable loads listed in Table 1 above.

**DISCUSSION**

The report is in compliance with the 2017 City of Los Angeles Building Code.

The approval is based on load tests. The allowable design load is based on a factor of safety of 4.

The charts in ASTM E1300 do not include glass compositions or support conditions similar to what was tested; however, Appendix X7 included allowable edge stress values in table Z7.1.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

Sentech Architectural Systems

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

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QUAN NGHIEM, Chief  
Engineering Research Section  
201 N. Figueroa St., Room 880  
Los Angeles, CA 90012  
Phone- 213-202-9812  
Fax- 213-202-9943

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Attachment: Details of Assembly – VFA - LR (1 Page)